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THE

EXTRA PHARMACOPŒIA

MARTINDALE
AND
WESTCOTT

THIRD EDITION

1884

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1692 f. 263
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THE

EXTRA PHARMACOPŒIA

OF

UNOFFICIAL DRUGS

AND

Chemical and Pharmaceutical Preparations.

BY

WILLIAM MARTINDALE, F.C.S.

Late Examiner of the Pharmaceutical Society, and
Late Teacher of Pharmacy and Demonstrator of Materia Medica at
University College.

WITH REFERENCES TO THEIR USE

ABSTRACTED FROM

THE MEDICAL JOURNALS,

AND A

THERAPEUTIC INDEX OF DISEASES AND SYMPTOMS.

BY

W. WYNN WESTCOTT, M.B. LOND.

DEPUTY-CORONER FOR CENTRAL MIDDLESEX.

THIRD EDITION.

LONDON:
H. K. LEWIS, 136, GOWER STREET, W.C.
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PREFACE TO THE THIRD EDITION.

The Second Edition (3,500) having been disposed of almost as quickly as the first, a Third Edition has been called for. Under the headings of Perchloride of Mercury, Tannate of Mercury, Sanitas, Ozonized Inunction, Asthma Powders, Syr. Hypophos. Co., Cinchona, Pavy's Sugar Test, Easton's Syrup, Nitrite of Sodium Tablets and Verbascum, additions have been made, including a score of new formulæ. Several new references are given and corresponding additions made to the Therapeutic Index.

WM. MARTINDALE,
NEW CAVENDISH STREET, W., *May*, 1884.

W. WYNN WESTCOTT, M.B.Lond.
TORRIANO AVENUE, N.W., *May*, 1884.

PREFACE TO THE SECOND EDITION.

The First Edition of the Extra Pharmacopœia was exhausted in a few weeks. The enlargement and revision of the work, together with the pressure of our other engagements, must be our apology for some delay in issuing a second edition. A Therapeutic Index has been added—a list in which under the heading of the Disease or Symptom will be found the more definite remedies now in use. Twenty-three additional Drugs and Chemical Preparations are also described, and forty-one new Formulæ, as well as numerous References, have been inserted to bring the work up to date. We have endeavoured to retain the previous compact form, but to meet the wishes of several subscribers a foolscap octavo issue, bound in cloth, will appear simultaneously.

December, 1883.

variations in dose from the standard given at the commencement of each article, variations dependent either on some speciality of purpose or on individual experience; others refer to the relief of a disease by a drug which has not previously been used for that purpose.

The meaning of the abbreviations used will be found in the following list. When the reference is to a periodical, the number put first is the number of the volume; then follow the last two figures of the year, and the last number refers to the page.

B.—Bartholow, R., A Practical Treatise of Materia Medica and Therapeutics.
Br.—The Retrospect of Medicine, by W. and J. Braithwaite.
B.F.M.Ch. Rev.—The British and Foreign Medico-Chirurgical Review.
B.M.J.—British Medical Journal.
B.S.H.—Pharmacopœia of the British Hospital for Diseases of the Skin.
Chem. News.—Chemical News.
G.—The Essentials of Materia Medica and Therapeutics, by A. B. Garrod, M.D., and E. B. Baxter, M.D.
L.—The Lancet.
L.H.—Pharmacopœia of the London Hospital.
M.P.C.—The Medical Press and Circular.
M.R.—The London Medical Record.
M.T.G.—The Medical Times and Gazette.
N.R.—New Remedies—New York.
Off.—*Official*—in the British Pharmacopœia.
P.G.—Pharmacopœa Germanica.
P.J.—Pharmaceutical Journal.
P.L.—Pharmacopœia Londinensis, 1851.
Pr.—The Practitioner.
R.—Handbook of Therapeutics, by Sidney Ringer, M.D.
Rank.—Ranking's Abstract of Medical Science.
R.O.H. — Pharmacopœia of the Royal London Ophthalmic Hospital.
T.H.—Pharmacopœia of the Hospital for Diseases of the Throat.
U.C.H.—Pharmacopœia of the University College Hospital.
U.S.—Pharmacopœia of the United States.

July, 1883. W. WYNN WESTCOTT, M.B.Lond.

ABRUS.

Jequirity Seeds.

Syn.—PRAYER BEADS; JUMBLE BEADS; GUMCHI (*Hindi*); INDIAN LIQUORICE.

These seeds, the produce of *Abrus precatorius*, of a scarlet colour, with a black patch round the hilum, hard and difficult to powder, are innocuous when eaten, but poisonous when placed in wounds or under the skin of animals. An infusion of Jequirity is used to produce purulent ophthalmia for the cure of granular lids; the seeds in powder 3 parts, cold water 500, with hot water 500 afterwards added, is filtered when cold, and applied 3 times in one day, and repeated the second and third days if required. The irritation is caused by a bacillus.—Ophth. Rev. i./83,19 *ex* Annales d'Oculistique ii./82,24 L. ii./83,120,600,742; B. M.J. ii./83,1015.

The ophthalmia is probably caused by a pepsin-like ferment, and not by the bacilli.—B.M.J. i./84,476,564.

ACIDUM BENZOICUM.

Benzoic Acid (*Off.*).

Syn.—HYDRATE OF BENZOYL.

Dose.—8 to 15 grains, or more.

In feathery, white, flexible crystals with a slight balsamic odour; has a sourish, warm, and persistent taste, and is irritating to the fauces. Obtained for medicinal purposes from benzoin resin. It can also be prepared from the urine of horses, cows, &c., but is then always more or less contaminated with hippuric acid. Soluble 1 in 220 of cold water; very soluble in alcohol, fats, oils, and alkaline solutions (forming benzoates). It prevents fats becoming rancid, as in adeps benzoatus, B.P.

It is said to possess antipyretic properties, and as an antiseptic to be even more powerful than carbolic or salicylic acid.—M.T.G. ii./73,488; P.J. 1875,307.

Four grains of Benzoic Acid with 1 grain of Canada balsam, or 1 minim of glycerine, make a good pill, but it is more frequently administered in solution, as a benzoate.

A saturated aqueous solution, or a solution in spirit or eau de Cologne (about 1 in 40), is very serviceable in relieving urticaria.—R.

A one in 20 solution in rectified spirit, and this diluted with water as required, may be used as an antiseptic solution or lotion. Applied as a dry antiseptic, its dust is irritating to the nostrils of patients and attendants.

Trochisci Acidi Benzoici, T.H.

Contain ½ grain in each, with red currant paste. Useful as a stimulant voice lozenge.

Ammoniæ Benzoas (*Off.*).

Dose.—10 to 30 grains, or more.

In colourless laminar crystals; soluble 1 in 5 of cold water, and 1 in 12 of rectified spirit.

Sodii Benzoas.

Dose.—10 to 30 grains; in phthisis, 1 to 4 drachms.

In white granular crystals; soluble 1 in 2 of cold water.

Benzoic Acid and the benzoates have been used in the treatment of phthisis and various febrile diseases, given in large doses, so as to be a germicide to the fever poison.

Benzoate of sodium in distilled water, 5 per cent. solution, is recommended for use as a spray for inhalation in phthisis, &c., to be used to the extent of 7 to 15 drachms daily for an adult, or 15 grains taken 5 to 10 times a day in milk, and continued for several months.—L.ii./79,886; B.M.J. ii./79,982; M.T.G. ii./79,585; Pr. xxiii.415; B.M.J. ii./82,125.

In diphtheria, 2 to 4 drachms daily, with 10 per cent. solution, as a spray inhalation.—Pr. xxiii.453; Pr. xxiv. 128,131.

Benzoate of sodium as an antipyretic. *Dose.*—2 to 4 drachms.—Pr. xxiii.217.

Successful in the treatment of rheumatic polyarthritis where salicylates fail; in dose up to 4 drachms daily.—Pr. xxv.218.

Use in whooping-cough, scarlet fever, and diphtheria. —M.R. 1880,315.

Editorial notes on therapeutic use in phthisis, &c.—M.T.G. i./79,596; B.M.J. i./80,23,72.

On the dog, a powerful hepatic stimulant, but not an intestinal stimulant; likely to prove useful in congestion of the liver, jaundice, &c.—B.M.J. i./79,69.

In the treatment of acute rheumatism, doses of 15 to 20 grains every 2 or 3 hours were successful in 5 cases. Should be continued in diminished doses for 24 or 48 hours after the rheumatic symptoms have disappeared.—B.M.J. i./81,336.

Sodii Hippuras, Hippurate of Sodium.

Dose.—5 to 30 grains.

Is met with in commerce as a readily soluble white amorphous powder. Both it and the benzoate are recommended in gout, gravel, and calculus as solvents for urates, an alkaline citrate being added if the urine of the patient be abnormally acid; hippuric acid salts react on urates in solution, and in time no trace of uric acid can be detected. Unlike the other organic salts of alkalies in which the acid radicle is decomposed by passing through the system, when taken, Benzoates and Hippurates are found in the urine as Hippurates.—L. i./83,487,579,669.

ACIDUM BORACICUM.

Boracic Acid (*Off. as a Test*).

Syn.—Boric Acid; Homberg's Sedative Salt.

Dose.—5 to 30 grains, or more.

In white, pearly, laminar crystals, somewhat unctuous to the touch, without odour; has a bitterish, cooling, not acid taste. Obtained for medical purposes from borax, by the action of sulphuric acid. Soluble 1 in 26 of cold water, 1 in 60 of rectified spirit, 1 in 5 of glycerine at 32° F., 7 in 10 at 212° F., slightly soluble in volatile oils.

It possesses mild antiseptic and antiputrefactive properties, but is not destructive to all low organic growths, *e.g.* mould fungus.

Preparations.

Gossypium Acidi Boracici, T.H.—See p. 144.

Linteum Acidi Boracici.

Lint impregnated with Boracic Acid, by passing it through a hot saturated solution coloured with cochineal, and then dried. It contains about half its weight of Boracic Acid.

Lotio Acidi Boracici.

Boracic Acid, 1; hot water, 20. Dissolve, and when cold use the clear solution.—L. i./75,603.

Pastillus Acidi Boracici, T.H. See p. 141.

Useful in aphthous affections of the mouth and throat.

Pessus Acidi Boracici.

Ten grains in each, with oil of theobroma.

Styles of Boracic Acid for the lachrymal sac and duct are prepared two inches long.

Suppositorium Acidi Boracici.

Three grains in each, with oil of theobroma.
Useful in pruritus.

Unguentum Acidi Boracici (Lister).

White Wax...	1
Paraffin	2
Almond Oil	2

Melt, and add in fine powder

Boracic Acid, warmed	1

Mix, and stir till it thickens. Set aside, and when solid reduce by rubbing in successive portions to a uniform smooth ointment.—L. i./75,787.

Unguentum Acidi Boracici (Martindale).

	No. 1.	No. 2.	No. 3.
Paraffin (135° or 140°) ...	5	5	5
Vaseline	5	10	15
Boracic Acid, in fine powder .	2	3	4

Melt the paraffin and vaseline together; sift the Boracic Acid into the liquid, and stir constantly till cold. These three ointments contain the same quantity of Boracic Acid.

Boracic Acid ointment is applied to surface wounds, burns, eczema, and other sores, as an antiseptic dressing and "healing ointment." On removal, it should leave the wound "clean"—it should adhere to the material on which it is spread, not so much to the sore. It is applied more like a plaster than an ointment. The hard ointment of Professor Lister is not now much in request. The No. 2 ointment, spread on lint or rag, is most suitable for general use, except in the summer, when it is sometimes too soft. No. 1 should then be used, and for smearing on No. 2 is sometimes too hard, when No. 3 should be used. It is very useful in pruritus ani et pudendi. Boracic Acid ointment is also very serviceable as a dressing in the minor surgery on shipboard, steamers particularly. For hot climates, Lister's or No. 1 should be used.

Boracic Acid was the basis of two Swedish nostrums—Aseptin, a powder, and Aseptin Amykos, a liquid, used in the preservation of articles of food and as an application to wounds. These, on being tested, were shown to owe their virtues to Boracic Acid, which is now one of the principal agents in the antiseptic treatment. Boracic Acid is also used largely in some parts of England and other countries for the preservation of milk. It is mild, and perfectly unirritating; even mechanically, the crystals do not irritate the skin, mucous membrane, wounds, ulcers, or granulating sores. Its powder, mixed with starch, forms a useful "dusting powder" for infants, &c. It checks the fetor of perspiration. A little Boracic Acid powder sprinkled in the socks or stockings prevents the disagreeable odour of sweating feet. The ointment is used as above described. The lotion and lint are useful in ulcers of the legs and elsewhere. A piece of protective oiled silk, sufficient to cover the sore exactly, is dipped in the boracic lotion and first applied, and over this a piece of boracic lint, also soaked in the lotion, large enough to extend an inch beyond the protective, is kept *in situ* with a bandage. Boracic Acid and Borax with glycerine or honey form valuable applications for aphthæ and stomatitis.

References.

Description and antiseptic uses of Boracic Acid lotion, lint, and ointment.—L. i./75,603,717,787.

Forms an excellent lotion for vegetable parasitic skin diseases.—L. ii./75,750.

As an ordinary dressing for wounds, either as lotion, lint, or ointment, it is an antiseptic that neither irritates nor inflames.—L. i./76,734.

Boracic Acid ointment useful as an antiseptic and healing ointment; wounds kept sweet two days, and dressings removed without disturbing the healing process.—B.M.J. ii./77,411.

Boracic Acid lotion checks the bad odour from excessive perspiration of the feet—used to wash the stockings and bathe the feet daily.—B.M.J. ii./80,463; Pr. xxv.371; Pr. xxvii.401.

As a cerate, 10 grains to an ounce for tinea tarsi, and as an eye lotion is very useful in purulent ophthalmia and conjunctival congestion.—Pr. xxv.56.

Beneficial results of its use in combination with sulphuric ether in puerperal fever and diseases of a septic character, in doses of 5 to 15 grains.—Pr. xxiv.254.

Boracic Acid neither checks the peptonising action of the gastric juices or the pancreatic secretion, nor the conversion of starch into glucose by the pancreatic or salivary secretions; yet it checks putrefactive fermentation, and a small quantity prevents the conversion of alcohol into acetic acid, while on the other hand the conversion of glucose into alcohol is favoured by the presence of even a very minute quantity of the acid.—P.J. 1882,187.

Boroglyceride.

A patented preparation, made by heating 92 parts of glycerine with 62 parts of Boracic Acid. A tough, deliquescent mass is produced, readily soluble in water and alcohol. It is recommended as a powerful antiseptic and preservative of meat, fish, milk, and other food—1 in 40 of water is used. It is also used as a surgical dressing.

Use in the treatment of wounds.—L. i./82,774,937; L. ii./82,841.

Use in purulent ophthalmia.—L. i./83,273.

ACIDUM CARBOLICUM.

Carbolic Acid (*Off.*).

Syn.—PHENIC ACID; PHENOL; HYDRATE OF PHENYL; PHENYL ALCOHOL.

Dose.—1 to 3 grains.

In colourless crystals liable to become pink; neutral to test paper; obtained commercially from coal tar. The purest acid of commerce—Absolute Phenol or No. 1—melts at 107° F. If, while liquefied, 6 to 10 per cent. of water be added, it becomes hydrated and remains liquid, unless exposed to a low temperature. It dissolves freely in alcohol, ether, chloroform, glycerine, fixed and volatile oils, fats, melted resins,—in vaseline about 1 in 20, water at 56° F. 1 in 14, at 95° F. 1 in 12. With a less quantity of water it forms an oily mixture, not a perfect solution, unless heat be applied; at 155° F. Carbolic Acid and water mix and dissolve in all proportions.

Carbolic Acid is a powerful antiseptic, antiputrefactive, and disinfectant.

Commercial Varieties in general use.

Absolute Phenol, in 1 lb., 4 oz., and 1 oz. stoppered bottles.

Detached crystals, slightly hygroscopic, taste pungent succeeded by a sensation of coldness in the mouth.

No. 1 Carbolic Acid, in 1 lb. bottles.

Of the same degree of purity as Absolute Phenol, but occurring in solid acicular crystalline masses. One part of either absolute phenol or No. 1 acid will make a perfect solution in 14 parts of water at 56° F. These are best adapted for surgical and medical use. They have not the slightest disagreeable odour.

No. 1 Carbolic Acid, *Liquid.*

Six per cent. of water added to the above. It remains liquid at the ordinary temperature.

No. 2 Carbolic Acid, *Crystals*, in 1 lb. bottles; and

No. 2 Carbolic Acid, *Liquid*, in 6 oz. bottles, or in bulk.

These make a clear solution in 20 parts of water, are suitable for many surgical purposes, and, as they have no disagreeable odour, they are, being less costly than the above, adapted for use in the sick-room; 1 in 40 may be sprinkled about, &c.

No. 4 Carbolic Acid, *Liquid*, in 16 oz. bottles, or in bulk.

This consists of about 20 per cent. Carbolic Acid and 80 per cent. cresylic acid, and is suitable for use as a household disinfectant for drains, sinks, water-closets, urinals, &c. A solution 1 in 40 of hot water is best used at night. It is colourless or pale straw coloured.

No. 5 Carbolic Acid, *Liquid*, in gallon jars or bulk. Is adapted for stable use, dust-bins, &c.

Preparations.

Carbolic Acid, Camphorated.

Absolute Phenol	12
Camphor	4
Water	1

Melt or rub together till liquefied. Remains liquid at low temperatures, but is not miscible with water.

Carbolic Acid Gauze, Carbasus Acidi Carbolici. In 6-yard pieces.

Unbleached cotton gauze, medicated with half its weight of—

Carbolic Acid	1
Resin	4
Paraffin	4

B.M.J. ii./71,227; P.J. 1872,41; L. ii./79,901.

Carbolic Acid Lotion.

Carbolic Acid	1
Water	19 or more.

Carbolic Oil.

Carbolic Acid, crystals	1
Olive Oil	9 (more or less if ordered).

A modification of this, known as **Lund's Oil**, is used for oiling catheters; it is—

Absolute Phenol	1
Castor Oil	4
Olive Oil	11

As the olive oil crystallizes in winter, the following answers better:—

Absolute Phenol	1
Castor Oil	7
Almond Oil	8

Carbolised Catgut Ligatures. Nos. 0, 1, 2, and 3.

No. 0 is finest.—B.M.J. i./69,303; P.J. 1872,41; Pr. xxv.372.

Carbolised Iodine Solution.

Tincture of Iodine...	45
Absolute Phenol	6
Glycerine	450
Hot Water	2,250

Becomes decolorised.

As a pigment in diphtheria, or as a gargle or inhalation: Internally for Asiatic cholera.—L. ii./83,566.

Useful as a nasal douche in ozœna.—L. ii./67,119; L. ii./83,845,935.

Carbolised Tow.

Tow impregnated with tar, and containing 10 per cent. of Carbolic Acid.

Carbolised Silk, for Ligatures.

Carbolic Acid, in crystals	1
Yellow Wax, melted	9

Dissolve the acid in the wax, soak the silk in the solution and draw it through a cloth to remove the superfluous wax.

Carbolised Wool, in 1 lb. packets.

Cotton wool charged with 6 per cent. of Carbolic Acid.

Glycerinum Acidi Carbolici (*Off.*).

Carbolic Acid, crystals, 1; Glycerine, 4.

Iodized Phenol.

Iodine	1
Liquid Carbolic Acid, by weight ...	4

Rub together and digest till dissolved.

For intra-uterine medication on cotton "lap."—B.M.J. i./80,471, and Pr. xxv.297. Useful also as an application for ringworm of the scalp.

Mackintosh Sheeting, Pink Hat-lining of Commerce.

Used as an antiseptic dressing.—B.M.J. ii./71,227.

Oiled Silk Protective.

Oiled silk coated on both sides with copal varnish, and when dry brushed over with—

Dextrin	1
Starch	2
Carbolic Lotion (1 in 20)	16

B.M.J. i./71,31; P.J. 1872,42.

Pastillus Acidi Carbolici, T.H.

Carbolic Acid	½ grain.
Glyco-gelatine	18 grains.

Antiseptic and stimulant.

Perles of Carbolic Acid.

Globules of carbolic oil, containing one grain of Carbolic Acid in each. *Dose.*—1 or 2.

Pilula Acidi Carbolici.

Absolute Phenol	2 grains.
Glycerine	¼ minim.
Powdered Althæa	3 grains.

Makes a good pill. *Dose.*—1.

Smelling Salts, Carbolised.

Absolute Phenol	24
Carbonate of Ammonia	16
Strong Solution of Ammonia	44
Oil of Lavender	1½
Camphor	3
Pine Sawdust (sifted)	*q.s.*

For coryza, hay fever, influenza, &c.

Suppositorium Acidi Carbolici.

Oil of Theobroma, melted	14 grains.
Absolute Phenol	1 grain.

The suppository of Carbolic Acid with Soap (*Off.*), almost useless, it dissolves so slowly.

Trochisci Acidi Carbolici, T.H.

One grain in each (nominally).

Unguentum Acidi Carbolici.

Absolute Phenol	1
Petroleum Cerate	19

Melt and stir till cold.

Useful for smearing the hands previous to operations, examination of ulcers, &c.

Vapor Acidi Carbolici.

20 drops of No. 1 liquid acid in a pint of water at 140° F. As a spray, 3 drops to an ounce of water.

Carbolic Soaps

For household, toilet, and medical purposes, are prepared of various strengths up to 20 per cent.

Carbolic putty and Carbolic lac plaster have fallen into disuse.

References.

For gradual development of the surgical uses of Carbolic Acid—LISTERISM—in the Antiseptic Treatment of wounds, compound fractures, abscesses, &c., *vide* L. i./68,326,357,387,507; L. ii./68,95,335,668; L. ii./75,515; L. ii./79,901; B.M.J. ii./68,53,101,461,515; B.M.J. i./69,301; B.M.J. ii./69,601; B.M.J. ii./70,243; B.M.J. i./71,30; B.M.J. ii./71,225; B.M.J. ii./75,769; B.M.J. ii./77,465,901; Dub. Jour. Med. Sci. Sept. 1875,229, Aug. 1879,97.

As at present used in surgery, the details are given in the Plymouth and Dublin Addresses.—B.M.J. ii./71,225; L. ii./79,901; Dub. Jour. Med. Sci. Aug. 1879,97; P.J. 1872,21,41.

Debate on.—L. ii./79,922; B.M.J. ii./79,906,1001.

SHORT DIRECTIONS FOR CARBOLIC DRESSING.—*a*. Before and during the operation.—(1) Carbolic Acid spray. Steam passing through a solution of 1 part of Carbolic Acid to 20 parts of water. (2) Sponges, hands of operators, &c., dipped in solution of Carbolic Acid: 1 in 20. (3) Instruments covered with oil, containing one-tenth part Carbolic Acid; some are dipped into or kept in watery solution: 1 in 20. (4) During intermission of spray, the wound is covered with a cloth dipped in Carbolic Acid solution: 1 in 20. *b*. After operation.—(1) A strip of lint soaked in an oily solution of Carbolic Acid (1 in 10), or a pure rubber drainage tube, similarly treated, is left hanging from the wound during the first (and, if necessary, following) days. Either of them is cut off flush with the edge of the wound. (2) Over this is placed the protective, in which a small hole is cut, corresponding with the end of the drainage tube. The protective consists of a layer of oiled silk, coated on both sides with copal varnish and afterwards brushed over with dextrin, which latter enables it to become uniformly moistened when dipped into solution of Carbolic Acid: 1 in 40. It is thus immersed just before being laid upon the wound, and is intended to prevent irritation, which would be caused by the actual contact of the antiseptic dressing with the wound. Then (3) seven layers of the antiseptic gauze. (4) Over this is applied the mackintosh, which is about 1 inch less in size than the gauze. (5) Then another layer of antiseptic gauze is applied; and, finally, (6) carbolised bandages, or elastic india-rubber web bandage round the edges of the dressings to insure that these are always in contact with the skin.—M.R. 1879,409 (modified).

Letter on Antiseptic properties of Carbolic Acid.—L. i./72,66.

Use in Ophthalmic Surgery.—B.M.J. i./80,166.

Results of Antiseptic treatment of 100 cases of ovariotomy.—B.M.J. i./80,243.

Diluted sulphuric acid, 10 minims, every hour, recommended as an antidote for internal poisoning by Carbolic Acid.—L. i./80,702.

In poisoning by absorption from antiseptic dressings a lotion of 5 per cent. solution of sulphate of soda is an efficient antidote.—Pr. xxiv.300.

Abstract of 172 cases of antiseptic abdominal sections. —L. i./81,101; B.M.J. i./81,122.

In poisoning by about 1½ ounces of common acid, apomorphia caused emesis with recovery.—L. ii./83,280.

Sawdust enclosed in gauze and charged with phenol 1, spirit 9, recommended as padding and external dressing for wounds.—L. ii./83,494.

As Carbolic Acid coagulates albumen, it is sometimes employed in the strong liquid form as a caustic. Anointing with oil any part accidentally touched with it will, to a certain extent, neutralise its caustic action. Camphorated Carbolic Acid is used with advantage in ulcer of the os and cervix uteri, in chronic inflammation of the uterus and cervix with excoriation, and in chronic uterine catarrh.—R. One in 80 or more of water as a vaginal injection, in leucorrhœa, uterine ulceration, and cancer, cleanses, heals, disinfects, and allays pain. Glycerine of Carbolic Acid is useful in ringworm; and an ointment, 10 to 30 grains of the acid to an ounce of lard, or added to other ointments, is efficacious in various parasitic skin diseases. As an inhalation Carbolic Acid lessens and disinfects the overabundant expectoration in bronchitis and gangrenous lung. The pastil, lozenge, or gargle 1 in 100 of water, is useful in sloughs of the mouth or throat.

Internally, in peppermint water, or better, the pilula acidi carbolici or perle is useful in flatulency with great distention, unaccompanied by pain; it is often combined with rhubarb and extract of nux vomica—a minute quantity of glycerine added will make these combine to form a pill; but Carbolic Acid is more frequently administered as a sulphocarbolate.

Sulphocarbolates of Ammonium, Calcium, Iron, Magnesium, Potassium, Sodium, and Zinc have been used. The action of sulphuric acid on Carbolic Acid with heat produces sulphocarbolic acid, which crystallizes with difficulty.

Sodii Sulphocarbolas, U.S.

In white acicular crystals, like sulphate of magnesia. Soluble 1 in 5 of water. *Dose.*—10 to 15 grains in 1 ounce of water.

In flatulency immediately after meals, give dose prior to food; if the attack occurs some time after food, give dose half an hour after meals.—R.

Use in cholera, and the dyspepsia of phthisis.—L. i./69,496, and i./68,144.

Internal use in diphtheria reduces temperature; must be continued some time to prevent relapse.—L. ii./83,448.

Zinci Sulphocarbolas.

Crystals in rectangular colourless plates. Soluble 1 in 2 of water.

Useful in gonorrhœa and leucorrhœa; 2 or 3 grains dissolved in an ounce of water for vaginal or urethral injection.

Solution of Coal Tar.

An alcoholic preparation known as *Liquor Carbonis Detergens* owes its properties in part to Carbolic Acid.

As a lotion, from 1 drachm to 1 ounce to a pint of distilled water forms a yellowish milky emulsion; or, as an ointment, 1 part to from 7 to 15 of basis. Useful in prurigo and chronic scaly skin diseases.

Liquor Bituminis Compositus, L.H.

Coal Tar	1 ounce.
Boiling Water	2 ounces.

Shake well and add

Tincture of Quillaia (1 in 5 S.V.R.)	1 pint.

Agitate occasionally in a closed vessel, and after 12 hours filter.

Has similar properties to liquor carbonis detergens.

ACIDUM CATHARTICUM.

Cathartic Acid.

Dose.—4 to 8 grains for adults, in pills with glycerine of tragacanth; or 2 to 3 grains in syrup.

A chocolate brown amorphous powder, isolated by Dragendorff from Alexandrian senna—the leaflets of *Cassia acutifolia* (*C. lanceolata P.B.*). It has the mild purgative properties of the drug, but not its unpleasant secondary action of causing nausea, vomiting or griping; it is almost tasteless, and being soluble in water it is easily administered, sweetened with syrup.—P.J. 1871,222.

ACIDUM CHROMICUM.

Chromic Acid, U.S.

Syn.—CHROMIC ANHYDRIDE.

In deliquescent, crimson, acicular or columnar crystals. It is odourless, and a powerful oxidising agent, decomposing alcohol, glycerine, &c., with evolution of heat. It acts as a corrosive caustic.

A watery solution—1 in 4, or stronger—is applied with a pointed glass rod to warts on genitals, to condylomata and lupus; and 1 in 40 to ulcerated gums, and syphilitic affections of tongue, pharynx, and larynx.—Pr. xxx.175.

Chromic Catgut Ligatures (*new*). Nos. 0, 1, 2, and 3. No. 0 is finest (Lister).

Take of Catgut, on the stretch, 5 parts, and immerse for twelve hours in chromic acid 1 part, distilled water 100 parts; transfer, after removing the excess of liquid with a cloth, into 100 parts of sulphurous acid; in 12 hours take out and dry the gut, and keep it dry. Before using, place it along with the instruments for 15 minutes in 1 in 20 carbolic acid lotion.

ACIDUM CHRYSOPHANICUM.

Chrysophanic Acid.

Syn.—CHRYSAROBIN; RHEIN.

Dose.—½ to 2 grains in skin diseases; 8 to 20 grains is an emetic purge.—B.M.J. i./77,608.

In commerce it is found as a dull orange yellow powder, but can be obtained by sublimation in bright shining yellow needles. It has an acrid taste, but is without odour. It is contained in Rhubarb root, Dock root, and the Yellow Wall Lichen, &c., but commercially it is prepared from Araroba or Goa powder by exhausting this with hot petroleum spirit or benzol, filtering and allowing the acid to crystallize out. In reality the substance thus obtained is not chrysophanic acid but chrysarobin. The latter is not soluble in weak solution of potash, but by the action of a stronger solution of this alkali in contact with the air it dissolves and becomes converted into chrysophanic acid in combination with potassium, from which true chrysophanic acid may be separated by the action of a mineral acid.—P.J. 1879,896.

Chrysophanic acid is freely soluble in hot benzol, hot chloroform, hot oil of turpentine and several volatile oils; in hot glacial acetic acid and hot glycerine about 1 in 60; olive oil, melted lard and vaseline dissolve it largely if heated, but on cooling any of these solutions much of it crystallizes out. It is insoluble in water, rectified spirit, and ether. It may be made into pills with glycerine of tragacanth.

Goa Powder.

Syn.—ARAROBA; PO' DE BAHIA.

A concretion obtained from the stem of a leguminous tree, *Andira Araroba;* imported from Brazil.

It occurs, mixed with chips of wood, as a rough powder or in small pieces. It is at first of a light yellow colour, but turns pale brown and darkens by exposure. About 80 per cent. of its weight consists of chrysarobin, or chrysophanic acid so-called, to which it owes its medicinal properties. It has been known and used in India under the name of Goa powder as a remedy for Indian ringworm and other skin diseases. The Portuguese settlers at Goa imported it from Brazil. In 1874 some Araroba was offered in the London drug market from Brazil, of which the writer got a sample; nothing was known of it except that it was a remedy for skin diseases. A specimen was afterwards exhibited at the Pharmaceutical Meeting in March, 1875. The writer having previously supposed the Indian drug (from information given to him by Dr. Giraud, late of Bombay) was the same as Araroba, asked about their identity.—

P.J. 1875,716. This Dr. Attfield ultimately established, and also that they consisted principally of chrysophanic acid.—P.J. 1875,721. Papers on its history and uses appeared almost simultaneously by Sir Jos. Fayrer and Dr. Da Silva Lima.—M.T.G. ii./74,470; M.T.G.i./75,249. The Indian mode of using the drug was to cut a lime fruit, dip it in the powder and dab it on the affected skin. The Brazilians mixed it with vinegar, and applied it, or used an ointment, 20 to 40 grains with 10 drops of acetic acid to an ounce of lard.—M.T.G. i./75,249; P.J. 1875,723.

For the further chemical history and botanical source, *vide* P.J. 1864,345; 1875,721,801; 1877,709; 1879,775, 986; 1880,42, 814.

Used externally, chrysophanic acid is a powerful stimulant and parasiticide in many skin affections. It has also been administered internally for psoriasis, but even in half grain doses it purges the patients so much, that as a rule its use cannot be persevered in to produce a cure.

Unguentum Acidi Chrysophanici.

Chrysophanic Acid ...	...	20 grains.
Benzoated Lard ...	...	1 ounce.

Mix, melt and dissolve, then stir till cold. Unguentum Chrysarobini, U.S. is 1 in 10 of benzoated lard; about double the strength of the above.

Chrysophanic acid ointment has been used as a successful remedy in psoriasis, lupus, ringworm of the scalp, pityriasis, tinea circinata, &c. For some forms of eczema and other skin affections a milder ointment should be used—5 to 10 grains to an ounce. It is important that the acid should be dissolved in the fat. It stains the skin and hair, and a strong ointment after three days' continued use sometimes produces feverishness and irritation, accompanied by discoloration of the skin beyond the parts to which it has been applied. The stains can be removed from the skin, linen, &c., with benzol, or a weak solution of potash or chlorinated lime.

Two cases of chronic psoriasis cured by the acid.—B.M.J. ii./76,819.

For tinea, ointment 20 grains to one ounce.—B.M.J. i./77,199. ... ...

Psoriasis cured, when tar ointment failed.—B.M.J. i./77,510, 546; B.M.J. i./78,663, 866.

Occasions sometimes erythematous irritation of the skin with violet or purplish discolorations, and at times minute papules.—B.M.J. i./79,223.

Useful as ointment, 20 grains to one ounce in acne rosacea.—M.T.G. i./77,665.

Ointment very useful in tinea, psoriasis, &c.—Pr. xx.415; Pr. xxi.444.

The acid is a powerful local stimulant; not, however, tending towards vesication or ulceration; curative properties best shown in psoriasis; is an undoubted parasiticide, especially in ringworm of the body and tinea versicolor.—Pr. xxii.376.

Nine cases of tinea circinata cured in a week by Goa powder ointment, not so successful in tinea tonsurans.—L. i./77,124.

Case of psoriasis cured by chrysophanic acid ointment, interesting, as showing that the acid does not act constitutionally.—L. ii./81,74.

For psoriasis given in dose of $\frac{1}{2}$ to 2 grains internally with success.—L. i./82,817.

For psoriasis, results given internally not favourable; caused vomiting, but ointment used successfully.—L. ii./82,702.

For the same disease in $\frac{1}{10}$ to $\frac{1}{5}$ grain doses given with success.—L. ii./82,792.

Given internally to three cases of psoriasis without success.—L. ii./82,935.

ACIDUM HYDROBROMICUM DILUTUM.

Diluted Hydrobromic Acid, U.S.

Syn.—Medicinal Hydrobromic Acid; Aqueous Solution of Hydric Bromide.

Dose.—20 to 60 minims, well diluted.

Hydrobromic acid for medical purposes has been directed to be prepared as follows:—

Bromide of Potassium	5188 grains.
Distilled water	4 pints.
Dissolve and add	
Tartaric acid	6337 grains.

Stir well together, cool to as low a temperature as possible and decant the clear liquid for use, from the acid tartrate of potassium which will have been deposited.—B.M.J. ii./76,42; T.H.

One drachm equals 8 grains of bromide of potassium: thus prepared, the liquid contains 8 per cent. hydric bromide; U.S. has 10 per cent.

A purer preparation may be made by decomposing bromide of potassium by means of sulphuric acid and distilling the supernatant liquid.—P.J. 1878,728.

It is a colourless, very sour liquid, without odour. It is used to allay nervous excitability and exhaustion, as a solvent for quinine and preventing quinism, and as an alternative for bromide of potassium; 8 minims will dissolve 5 grains of sulphate of quinine.

References.

To obviate the headache of cinchonism and the fulness of the head felt when taking iron; for anæmia; also to remove the ill effects of excess of tea or alcohol; and to calm excited heart.—B.M.J. ii./76,42; P.J. 1877,715; Br. ii./76,356.

Letters on therapeutic uses.—B.M.J. i./77,480.

For tinnitus aurium and tickling hacking cough at night, in doses of 10 minims or more is very useful.—B.M.J. ii./79,316.

Used as a sedative neurotic.—Pr. xx,447.

Used in headache, with flushing in the face and ringing in the ears, also in toothache.—L. i./82,975.

ACIDUM HYDROFLUORICUM.

Hydrofluoric Acid.

Syn.—Fluoric Acid.

An aqueous solution of hydrofluoric acid gas, obtained by passing the gas produced by the action of sulphuric acid on fluor spar into water. The impure acid thus prepared is redistilled for medicinal use. The pure redistilled acid contains about 30 per cent. of the gas. It emits suffocating fumes, and requires to be kept in gutta percha or leaden bottles.

Acidum Fluoricum Dilutum, T.H.

Dose.—15 to 60 minims.

Contains a half per cent. of the redistilled acid, and "is kept in glass bottles for use." Even in this diluted condition it quickly acts on the glass and becomes inert.

Goitre, 20 cases treated by diluted hydrofluoric acid in doses of 15 to 70 minims—17 recoveries and 3 failures.—L. i./81,448, 497, 537.

Diphtheria, 40 cases (only 3 died) treated by inhalations of hydrofluoric acid gas; produced by the action of sulphuric acid on fluor spar heated in a leaden vessel. The apparatus requires refilling 5 times in 24 hours.—L. ii./82,543.

ACIDUM LACTICUM.

Lactic Acid, U.S. and T.H.

Dose.—5 to 20 minims or more, well diluted.

A colourless, odourless, syrupy, sour liquid, obtained by the lactic fermentation of milk or cheese; Sp.Gr. 1·212.—U.S. It is miscible with water, alcohol, and ether, and it coagulates milk and albumen.

Acidum Lacticum Dilutum (Sp.Gr. 1·040).

One volume of Lactic Acid is diluted with 6 volumes of distilled water. This has generally been used in this country as *medicinal* Lactic Acid, but it is too weak for making the preparations referred to in continental formulæ, and may have led to the discrepancies in the results obtained from Lactic Acid here, as compared with those recorded on the Continent in the treatment of diphtheria and diabetes.

Calcii Lactas. *Dose.*—1 to 5 grains.

An opaque, white, crystalline powder; unless freshly prepared not readily soluble in water.

Ferri Lactas, Lactate of Iron Ferrous Lactate.

Dose.—2 to 10 grains.

In greenish-white crystals, soluble in water; when taken internally is easily assimilated by the system.

Nebula Acidi Lactici, T.H.

Lactic Acid	1 drachm.
Distilled Water	15 drachms.

Of great use in diphtheria; appears to have the effect of dissolving the membranous exudation.

Syrup of Lactophosphate of Lime and **Syrup of Lactophosphate of Lime and Iron** are French specialities. The adult dose of them is 3 to 6 tablespoonfuls daily. The English manufactured syrups corresponding to them are given in 1 or 2 teaspoonful doses. The following formulæ are in use as substitutes:—

Syrupus Calcii Lactophosphatis.—N.R. xii.58.

Lactate of Calcium	(by weight)	5
Orange-flower Water	„	10
Syrup	„	80

Rub together, and add

Phosphoric Acid (S.G. 1·500)	„	5
Oil of Lemon mixed with	„	1-30th
Rectified Spirit	„	1-10th

Shake well to dissolve, then strain or filter.

Dose.—1 to 2 drachms.

Syrupus Calcii et Ferri Lactophosphatis.

Dose.—1 to 2 drachms.

May be made by dissolving a grain of lactate of iron in each fluid drachm of the syrup of lactophosphate of calcium.

References.

For croup, as lactic acid dissolves the fibrinous exudations; 15 to 20 minims in half an ounce of water used as spray with great success.—M.T.G. i./70,95.

Two cases of diphtheria treated by spray.—B.M.J. i./78,644.

Used as a spray inhalation after tracheotomy for croup.—M.T.G. ii./76,294.

In diabetes, 2 to 4 drachms in half a pint of water, taken during the day, with exclusively animal diet, recommended by Cantani. Also given in dyspepsia.—Stillé and Maisch.

Two cases of diabetes treated by non-amylaceous diet and lactic acid (? diluted lactic acid), half an ounce daily for weeks; no benefit from treatment.—B.M.J. ii./72 211; M.T.G. ii./72,205.

Lactic acid is a soporific in cases of general enfeeblement and debility following disease, best given as an enema, neutralised by bicarbonate of soda, 5 to 20 grammes of each at bedtime.—M.T.G. ii./76,53.

In catarrh of bladder gave favourable results.—Pr. xxvii.212.

In phthisis, 10 minims twice a day, to allay cough and quench thirst, was useful.—B.M.J. ii./81,470.

In chronic catarrh of the bladder, lactic acid drinks arrest the ammoniacal decomposition of the urine, both inside as well as outside this organ, dissolve the salts which abound in it, and stop the development of microscopic organisms in it.—Pr. xxvii.213.

ACIDUM PHOSPHORICUM FORTE.

Strong Phosphoric Acid.

Dose.—2 to 6 minims.

For medicinal use, Phosphoric Acid is now made by burning phosphorus in a current of dry air. The phosphoric anhydride obtained is combined with water and evaporated to a syrupy consistence, having Sp. Gr. 1·750. This contains 64·3 per cent. of the anhydride; it can thus be obtained free from arsenic (a constant impurity made by the nitric acid process). A mixture of 14 parts (weight) with 5 parts of water has Sp. Gr. 1·500 (nearly); it contains 47·4 per cent of anhydride, and is convenient for use in pharmacy.

Acidum Phosphoricum Dilutum (*Off.*)Sp.Gr.1·08.

Contains 10 per cent. of anhydride, and may be made approximately by diluting 4 parts of acid Sp. Gr. 1·750. with 21 of water, or 4 parts of acid Sp. Gr. 1·500 with 15 of water.

Dose.—10 to 30 minims.

ACIDUM PYROGALLICUM.

Pyrogallic Acid.

Syn.—PYROGALLOL.

Dose.—½ to 1½ grain in aqueous solution, or in a pill with syrup,—this must be freshly prepared, and kept from the light.

In very light small white crystals prepared from gallic or tannic acids by carefully heating. It is without odour, tastes insipid, producing a sensation of coolness on the tongue. Soluble in 2½ parts of water, and in 10 parts of melted lard. It has great affinity for oxygen, and possesses antiseptic properties. It darkens the skin and hair, and is used in conjunction with a solution of nitrate of silver for blackening the hair. It is also used in photography.

It is given like gallic acid, but in much smaller doses, to check hæmoptysis, and used in the form of ointment, but must not be too freely applied, for psoriasis, on which it seems to have a specific influence.

Preparation.

Unguentum Acidi Pyrogallici, B.S.H.

Syn.—JARISCH'S OINTMENT.

Pyrogallic Acid	... ...	60 grains.
Lard	... ...	1 ounce.

Mix thoroughly. The acid will be in solution if the lard be melted. Used in cases of psoriasis.

References.

As an internal astringent for hæmoptysis in doses of a grain every half hour until it ceases, also prescribed with ergot for the same purpose, does not cause vomiting nor derange the stomach. — Dub. Jour. Med. Sci. 1878,470; Pr. xxii.124.

In psoriasis 10 per cent. ointment constantly applied is painful, but efficacious; the tubercle is destroyed, but the healthy skin is unaffected.—Pr. xxiii. 207,373.

Therapeutic uses and toxic effects. A patient suffering from universal psoriasis was poisoned by pyrogallic ointment applied to one half of his body, whilst to the other half chrysophanic acid ointment was applied for comparison. — M.R. 1880,49; Pr. xxv. 135.—B.M.J. i./81,1007; L. ii./81,891.

Proved useful in Hebra's wards in the treatment of psoriasis and other cutaneous affections. 10 per cent. ointment brushed in twice a day and parts covered with flannel.—Pr. xxv.378.

Has powerful affinity for oxygen, hence supposed it might destroy germs. M. Bovet found 1 or 2 per cent. solution prevents formation of organisms; 2 per cent.

solution is a useful disinfectant of the skin.—B.M.J. i./79,278.

Cases of old standing psoriasis cured by use of 10 and 5 per cent. ointment.—L. i./81,576.

Ointments containing 5 to 25 per cent. when brushed on patches of psoriasis cure in four weeks.—Br. ii./79,lix.

ACIDUM SALICYLICUM.

Salicylic Acid.

Dose.—5 to 30 grains, or more.

In light acicular crystals, odourless, the dust of it is irritating to the nostrils, taste sweetish, slightly soluble in cold water (1 in 760), soluble 1 in 4 of rectified spirit, 1 in 120 of olive oil, 1 in 100 of castor oil, and 1 in 200 of glycerine; soluble also in melted fats and vaseline; 20 grains of salicylic acid are rendered soluble in an ounce of water by the addition of 25 grains of borax; solutions of acetate of ammonium and acetate of potassium are recommended for use as solvents, but they only act by forming salicylates of the bases and setting free acetic acid, the odour of which becomes distinctly perceptible; citrate of potassium and phosphate of sodium act as solvents in a similar manner. An aqueous solution of the acid gives a deep violet colour with persalts of iron.

Salicylic acid may be prepared from salicin, from oil of winter-green or tea berry (*Gaultheria procumbens*) and other sources, but commercially it is largely prepared by heating carbolic acid with caustic soda in a suitable vessel and passing a stream of carbonic acid through it. Salicylate of sodium is formed, from which the salicylic acid is set free by hydrochloric acid. It requires purification by redissolving, dialysing, and crystallizing. The larger crystals obtained by dialysis, and resembling sulphate of quinine in appearance, are purer than the smaller crystals or the amorphous acid, which is often of a pink tint.

Test.—Dissolve 8 grains in 80 minims of strong alcohol, pour the clear solution into a watch glass and leave to evaporate at the ordinary temperature of the atmosphere. The acid forms around the edge of the watch glass a ring of beautiful efflorescent aggregated crystals. This is pure white if the acid be pure and has been recrystallized, but yellowish or yellow if the precipitated acid be used. If brownish or brown, it is unfit for use.

Commercially the acid prepared from oil of winter-green, the *natural* salicylic acid of Mr. J. Williams, is the purest. Oil of winter-green is an impure salicylate of methyl. When treated with caustic potash solution and the volatile matters distilled off, an impure salicylate of potash remains; this is decomposed by hydrochloric acid, and the salicylic acid obtained purified by dissolving and crystallizing finally from weak spirit. It is in crystals resembling those of strychnia, and larger than those prepared from carbolic acid.

Salicylic acid prevents fermentative and putréfactive processes and is generally an antiseptic. It is largely used for surgical dressings, especially in cancerous affections. It has the advantage over carbolic acid that it has no smell and causes less local irritation, and the disadvantage that it is not volatile, and therefore does not affect the surrounding atmosphere sufficiently. It has been given for various febrile conditions, but particularly for acute rheumatism; for the latter disease salicin is much preferred.

Internally, its effects closely resemble those of quinine, even to the production of ringing in the ears and transient deafness. Large doses alone act as a direct poison on the heart and respiration. It is only partly destroyed in its passage through the organism, and reappears in the urine as late as fifty hours after it has been taken, partly as such and partly as salicyluric acid. Its curative properties are hence due (1) to this resistance to decomposition; (2) to its harmlessness even in gramme doses; and probably (3) to the direct arrest of certain fermentative processes, which we must regard as the exciting cause of various diseases.—Binz.

It has proved useful in the treatment of Menière's disease in small doses.—B.M.J. ii./77,477.

Salicylic acid may be made into pills with glycerine of tragacanth, but the dose required being large, and being so insoluble in water, it is not often given in the pure state; it is generally given as the salt, salicylate of sodium.

Granular Effervescent Salicylic Acid is prepared, containing 5 grains in 60 grains.

Ferri Salicylas.

Dose.—3 to 10 grains, or more in a pill.

In commerce is found as a purplish brown powder, slightly soluble in water; given as an anti-arthritic tonic and for tonsillitis.

Found useful, on account of its antiseptic and astringent properties and its slight solubility as an application to foul wounds with a tendency to bleeding.—Edin. Med. Jour. 1877,707.

Quiniæ Salicylas.—See p. 230.

Sodii Salicylas.

Dose.—10 to 30 grains in water—the taste may be disguised by the addition of a drachm of liquid extract of liquorice.

An odourless, white crystalline powder, or, if prepared from the natural acid in definite shining silky tabular crystals, soluble in its own weight of water, soluble also in rectified spirit. It possesses an unpleasant sweetish taste, but therapeutically it is more pleasant to take and more rapidly absorbed than the free acid. As it is more difficult to judge of the quality of salicylate of sodium, than of the acid, the following solution containing 10 grains of the salt in one drachm is found convenient for dispensing (Squibb):—

Solutio Sodii Salicylatis (1 in 6).

Salicylic acid, well crystallized	437	grains.
Bicarbonate of Sodium ...	270	,,
Distilled Water	4	ounces.

Mix, and when the effervescence ceases filter and add distilled water over the filter q.s. to make the filtrate measure six ounces.

Dose.—1 to 3 drachms = 10 to 30 grains.

Salicylate of Sodium has a stronger action on certain forms of bacteria than carbolic acid, quinine, boracic acid, and alcohol, and one which is scarcely a third less powerful than that of free salicylic acid (Dragendorff and Bucholtz in Binz). It is not compatible with free ammonia, carbonate of ammonia, or aromatic spirit of ammonia; if any of these be added to its aqueous solution, the mixture in a short time turns brown; it will do this irrespective of the source of the salicylic acid, whether natural or artificial.

Salicinum, Salicin.

Dose.—5 to 30 grains in aqueous solution, taste may be covered with liquid extract of liquorice, or small dose in pill with glycerine of tragacanth.

A neutral principle in white tabular scaly or acicular crystals without odour, taste moderately bitter. Soluble 1 in 20 parts of cold water. Soluble also in spirit but not in ether. Obtained commercially from various species of willow bark, contained also in poplar bark and in flower buds of meadow sweet.

Salicin is used in small doses, often combined with valerianates and compound rhubarb pill, as a mild tonic. In large doses it has a specific action over acute rheumatism. It is not so depressing in its action as salicylic acid. Under the influence of a ferment, *e.g.* saliva, it is decomposed with absorption of water into saligenin and sugar, and saligenin is afterwards readily oxidised into salicylic acid.—Binz. It is not adapted for use as an external antiseptic. Is used for ague.

Pulvis Salicylicus cum Talco, P.G.

Salicylic Acid	3
Wheaten Starch	10
Talc	87

Mix to a fine powder. Is used to correct the fetid or excessive perspiration of the feet.

Salicylated Camphor.—See p. 71.

Salicylic Collodion.—See p. 96.

Salicylic Cream.

Salicylic Acid	2 drachms.
Carbolic Acid	1 drachm.
Glycerine	10 drachms.

Rub the salicylic acid to a powder, add the glycerine and carbolic acid, and mix.

Used as pigment when the skin is irritated by the discharge from wounds, &c., under antiseptic dressings.

Salicylic Plaster.—A German preparation, is successful in removing thickened epidermis.—L.ii./83,951; B.M.J.ii./83,1071; B.M.J.i./84,602.

Salicylic Silk (McGill).

Silk waste, teased and impregnated with 10 per cent. of salicylic acid and a little glycerine. In 1lb. boxes.

Used as a surgical dressing.—L. i./81,9; L. ii./81, 623,671.

Salicylic Wool (Thiersch).

Cotton wool impregnated with 4 per cent. of salicylic acid, and the same quantity of glycerine to make the acid adhere to the wool.

Salicifrice.—A special preparation.

An antiseptic tooth-paste, having a saponaceous basis and containing salicylic acid. In use it is very refreshing to the mouth and palate.

Unguentum Acidi Salicylici.

Salicylic Acid	1
Petroleum Cerate	29

Mix (it is preferred with the acid not dissolved).

References to Salicylic Acid as an Antiseptic.

Spoken of as a much more powerful antiferment than carbolic acid. Forms a valuable antiseptic ointment. An application of salicylic acid and oil removes the fetor, and forms a comforting application to ulcerated cancer of the breast.—L. ii./74,785; L. ii./75,431, 562,871.

Use of, as an antiseptic, &c., in surgical dressings.—B.M.J. ii./75,510,769.

Editorial note on antiseptic properties. It is peculiarly adapted as a toilet requisite for dentifrices, and as a preventive of the disagreeable odour caused by fetid perspiration, without producing any injurious effects.—B.M.J. i./75,252.

As an ointment for eczema.—L. ii./75,870.

As an ointment or lotion, useful in ringworm.—L. i./80,482.

Used as snuff in hay-fever, acted like magic.—B.M.J. ii./78,101.

Salicylic acid, strychnia, morphia, narcotine, and brucia are all without any effect upon bacteria, even when quite large quantities are put into the solution containing germs, while phenol, spongy iron, alcohol, and permanganate of potassium destroyed bacteria with great rapidity.—Jour. Chem. Soc. xxxix.258; P.J.1881,765.

References to Salicylic Acid and to Salicin given internally.

When given boldly in one large dose of one drachm, or in several smaller doses of 20 to 30 grains, to a healthy person, these substances produce results similar to those of large doses of quinine, but small doses are soon tolerated and the physiological effects are not obtained—they cause headache, suffusion of the eyes, flushed face, slight deafness, muscular trembling and weakness, hurried respiration, weak and quickened pulse and render the perspiration and urine less acid (?). It is considered that Salicin is converted into Salicylic Acid in the body, and as such produces the effects. In health, the effect on temperature is but little marked and at times variable.—R.

In disease, they lower the temperature, and have a decided action on pyrexia. They have been employed in most febrile diseases, but it is in acute rheumatism that their chief power is felt. For this disease Salicin is preferred. Large doses do great good. 30 grains every 2 hours, or hourly if required, soon produce a marked effect. These remedies should be continued in smaller doses for ten days after the temperature has become normal.—R.

Salicin, specially recommended for acute rheumatism in doses of 10 to 30 grains every 2, 3, or 4 hours.—L. i./76,342,383.

Also the same, and advised to continue its use for a fortnight after the decline of the disease; it is a pleasant bitter, and may be conveniently prescribed with syrup of orange-peel. Hardly ever produces the unpleasant effects which are seen from taking salicylic acid.—B.M.J. i./76,627.

General recommendations for its use in rheumatic fever.—L. ii./76,601,677; L. i./79,875; L. ii./79,79.

For a comparison of the salicylic acid treatment of acute rheumatism with that by alkalies.—L. i./80,201, 244,281.

Special advantages of salicin over salicylic acid for rheumatism.—B.M.J. i./81,229.

In rheumatism 40 grains of salicylate of sodium, or 30 grains of salicylic acid every 2 or 3 hours. Note—5 grains of soda salt are equal to 4 grains of acid.—L. ii./79,905

Salicylic acid, whilst of doubtful use in chronic rheumatism, is a rapid and radical remedy for the acute form; given in doses of 7½ to 15 grains.—B.M.J. i./76,569.

Whether the acid or its salts be given, they act as a powerful antipyretic. A dose of 5 grammes produces a rapid fall of temperature and perspiration; in acute inflammations the local mischief is not affected by it, but in acute rheumatism the articular pains are dispersed, and a rapid cure often effected.—Pr. xvi.208.

Whilst of most use in acute rheumatism, it has resemblances in action to quinine, and combats malarial poisoning.—Pr. xi.,449.

For cases of rheumatism successfully treated by the acid.—L. i./76,530,737,840; L. ii./76,11,254,681,771.

For a detailed statement of its effects on healthy subject, especially as regards temperature.—Pr. xxiii.184.

Typhoid cases treated with salicylate of sodium, and recommended for use as an antipyretic.—L. i./81,409,455.

Salicylate of sodium useful in typhoid.—L. ii./79,905.

Remarks on the danger attending the use of salicylic acid in acute rheumatism.—L. i./80,327.

Delirium in cases of acute rheumatism, treated by salicylate of soda.—B.M.J. i./81,159,337.

Salicylates of sodium and ammonium, useful in treating acute zymotic diseases, and mixed with honey or made into lozenges for diphtheritic attacks in the throat. —B.M.J. i./79,67.

Acute rheumatism treated by salicylates.—L. ii./81, 1030,1080,1119,1120; L. i./82,9,54,57,134,135,138; B.M.J. i./82,46,459.

Statistics of above treatment in 39 hospitals; while salicylates are said frequently to produce bad effects, none such are attributed to salicin.—L. i./82,57.

Thesis on the salicylate treatment of rheumatism; duration of the acute stage reduced to 3 or 4 days. Convalescence is more rapid, and tendency to heart complication probably less than from any other treatment.—Pr. xxviii.321,401.

Acidum Scleroticum.—See Ergota, p. 114.

ACIDUM SULPHUROSUM.

Sulphurous Acid (*Off.*).

Syn.—SULPHUROUS ANHYDRIDE, OR SULPHUROUS ACID GAS COMBINED WITH OR IN SOLUTION IN WATER.

Dose.—½ to 2 drachms.

Obtained for medicinal purposes by deoxidising sulphuric acid by means of charcoal and passing the gas into distilled water. According to the pharmacopœia it is a colourless liquid, having a pungent sulphurous odour and containing 9·2 per cent. of sulphurous anhydride. Unless under pressure or cold it cannot be kept of this strength, and it would then be almost as effervescent as a bottle of soda-water. In commerce, if of good quality and recently prepared, it contains from 4 to 5 per cent. of the gas. It is liable to oxidise into sulphuric acid if long kept, and when used for throat affections the presence of more than traces of sulphuric acid is objectionable. It may be freed from this by addition of sulphite of barium as long as a precipitate is thrown down and then decanted from the sediment (sulphate of barium). An alcoholic solution can be made much stronger and is more stable than an aqueous one.

Sulphurous acid is used as a deoxidising antiseptic and disinfectant. It arrests fermentation by destroying the vitality of the organisms producing it. It is often used in the gaseous condition, for disinfecting rooms in which patients suffering from infectious fevers have been nursed. It may be produced by igniting 3 or 4 ounces of sulphur, placed in a strong earthen vessel, which for safety should be supported over a bucket of water, on a pair of tongs laid across it. After the chimney and all crevices have been closed, and paper pasted over apertures in the windows, &c., the sulphur may be ignited by being moistened with methylated spirit and lighted with a match; the sulphur catches readily. The door should then be shut, pasted up with paper and left for six hours. The air should be rendered unfit for respiration, metals exposed in the room should be greased, and coloured materials as much as possible removed, as the gas possesses bleaching properties on some substances.

Sulphurous acid, the solution, is applied externally as a lotion—one part to two or more of water and sometimes a little glycerine added—for parasitic affections such as chloasma, ringworm, pruritus, and thrush, with very good results. It is sometimes sprayed into the throat for tonsillitis and asthma, or used as an inhalation, a teaspoonful to a pint of cold water. Internally, for gastric fermentation accompanied by sarcinæ it is given with success in its combinations, as

Sulphite of Sodium. *Dose.*—5 to 20 grains; or as

Hyposulphite of Sodium. *Dose.*—10 to 60 grains.

This is also used as a lotion, 1 in 10 for chloasma, &c. It may be made to evolve sulphurous acid gas as in the following lotion:—

Hyposulphite of Sodium ...	3 ounces.
Diluted Sulphuric Acid ...	½ ounce.
Water	16 ounces.

As a paint for the throat and as a spray in aphthæ and diphtheria and as a fumigation, and its use in the cattle plague.—M.T.G. i./67,492.

Used successfully as a spray for sore-throat, chronic bronchitis, &c.—M.T.G. i./67,549.

In gonorrhœa 1 part to 15 of water injected 3 times a day was effectual.—L. i./81,205.

Sulphurous acid has little effect on bacteria; after 15 days meat solution containing them, and impregnated with the gas, was bleached, but they were still alive in the strongly acid solution.—Jour. Chem. Soc. xxxix.252; P.J. 1881,765.

A solution 1 in 2 of water, as an antiseptic, is useful in removing fetor of cancerous sores.—B.M.J., i./83,1281.

ACONITIA (*Off.*).

Aconitine.

Dose.—$\frac{1}{240}$ to $\frac{1}{60}$ grain may be carefully increased up to $\frac{1}{24}$ grain.

An alkaloid obtained from *Aconitum Napellus*, and probably other species of aconite. In white, generally amorphous, irregular lumps, may be with difficulty obtained in acicular crystals, freely soluble in dilute acids and rectified spirit, soluble also in ether and according to B.P. 1 in 150 of cold water, but this does not apply to the Aconitine of British makers, which requires upwards of 4000 parts of water to form a solution at the ordinary temperature. The English is preferred, next the French, and then the German. English Aconitine (Morson's), according to Flückiger, is supposed to be identical with the Pseud-Aconitine obtained from Bish or Nepaul aconite root, the produce principally of *Aconitum ferox*. Another principle is contained in both *Aconitum Napellus* and *Aconitum ferox*, named by Hübschmann Napellin, but from the two sources the Napellin is not identical.—L. i./82,325.

The crystallized Aconitine obtained by Duquesnel's process from *Aconitum Napellus* is said to be a very potent preparation.

Aconitine is a violent poison, and its action is uncertain, unless that of the same maker be always employed; and, although much has been written of late on it from a chemical point of view, there are still doubts as to which is the more active physiologically, Aconitine or Pseud-Aconitine obtained from *A. ferox*. Aconitine melts at 183° to 184° C.; Pseud-Aconitine at 104° to 105° C.—P.J. 1880,2. When rubbed on the skin, Aconitine causes a tingling sensation, followed by prolonged numbness. It may be administered in the form of pill, carefully rubbed down with a little sugar of milk, and made into a mass with glycerine of tragacanth. The best alkaloid is a somewhat costly preparation.

Preparations.

Injectio Aconitiæ Hypodermica.

Aconitine (English)	1 grain.
Diluted Sulphuric Acid ...	*q.s.*
Distilled Water to	½ ounce.

Dilute one drop of the acid with about one drachm of water, and carefully add drop by drop to the aconitine, avoiding excess, till it is dissolved, make up the measure to half an ounce with water.

Dose.—1 to 4 minims.

Oleatum Aconitiæ.

Aconitine	2 grains.
Oleic Acid	100 minims.

Dissolve; may be perfumed—is readily absorbed when painted on for neuralgic affections.

Unguentum Aconitiæ (*Off.*).

Aconitine	8 grains.
Rectified Spirit	½ drachm.

Dissolve, and add

Lard...	1 ounce.

Mix thoroughly. Should be freshly prepared. A piece the size of a bean is gently rubbed in for facial neuralgia, care being taken not to apply where the skin is broken, or to touch the mucous membranes.

Other Preparations of Aconite.

Emplastrum Aconiti in rubber combination, sheets 7 in. by 5 in., rolls 7 in. by 36 in.

Emplastrum Aconiti et Belladonnæ is also prepared in sheets and rolls as above.

Extractum Aconiti (*Off.*).

(from fresh leaves and flowering tops).

Dose.—½ to 2 grains.

Extractum Aconiti Radicis Alcoholicum, Alcoholic Extract of Aconite Root (Fleming).

Dose.—1/10 to ⅓ grain.

Must be carefully distinguished from the preceding.

Linimentum Aconiti (*Off.*).
1 = 1 of root; useful in neuralgia.

Pastillus Aconiti.—See p. 141.

Pilula Aconiti.

Aconite Root, in powder	...	⅛ grain.
Sugar of Milk... ...	...	1 grain.

Triturate, and add

Glycerine of Tragacanth	...	*q. s.*

To make one pill.

Dose.—1 hourly = 1 minim of tincture.

Tinctura Aconiti (*Off.*).

1 of dried root in 8 of rectified spirit.

Dose.—As a febrifuge 1 minim every 10 minutes or quarter of an hour, for an hour, then repeat dose every hour till skin acts well and temperature is reduced.—L. i./69,44. In chronic cases 5 to 10 minims less frequently.

Fleming's and **Turnbull's Tinctures** of **Aconite** are about five times the strength of the above. They are sometimes ordered for external use, and were given in doses of 1 to 5 minims.

Aconitine is a powerful poison, so are all aconite preparations. It paralyzes all nitrogenous tissues. . . . . it affects all the tissues of the heart, first its ganglia, next its nerves, and last its muscular substance.—R. It acts therapeutically as a depressent, calmative, and diaphoretic. Externally the ointment of aconitine, or aconite liniment painted on either in a pure condition or mixed with belladonna or chloroform liniment, immediately relieves neuralgia, sciatica, and many forms of rheumatism. When effectual they cause a sensation of tingling, and subsequent numbness of the parts to which they are applied. Internally, tincture of aconite is given to control inflammation and to subdue the accompanying fever, with great success, especially if given in the early stages of the disease, in acute sore-throat, tonsillitis, catarrh, scarlatina, gonorrhœa, erysipelas, and other febrile affections, in doses of one minim every hour, it reduces pulse and temperature and causes free diaphoresis.

References.

Use of aconite in all forms of neuralgia, diseases of the heart, rheumatism, and erysipelas.—Fleming on Aconite.

Antagonism of aconitine to digitalin. — B.M.J. Reports 1877,89.

Aconitine of the greatest use in neuralgia of the fifth pair of nerves; dose $\frac{1}{140}$ grain up to $\frac{1}{12}$ grain (? not English.)—Pr. xxii.,457; Br. ii./79,xxiii.

Aconitine paralyses peripheral sensory nerves, and augments power of motor nerves.—Pr. xx.185.

Physiological action.—Pr. xx.100; Pr. xxii.108.

Hypodermic injection of $\frac{1}{200}$ to $\frac{1}{120}$ grain, useful in trigeminal neuralgia.—Pr. xxiv.136.

Also, $\frac{1}{64}$ grain injected, and dose carefully increased, produces rapid cure in neuralgia.—Pr. xxiv.205.

Fleming's tincture of aconite, one minim every hour in relapsing fever, reduces temperature and pulse, cleans tongue, induces sleep, increases quantity of urine, and promotes perspiration. Superior to Warburg's tincture. —Pr. xxvi.187.

Crystallized aconitine recommended for internal use. The German amorphous aconitine is less powerful than the French, of which $\frac{1}{240}$ grain doses 4 times a day caused alarming effects.—L. ii./80,778.

Note on the variations of strength of different samples of aconitine. Pseud-aconitine acts more on the respiratory system, aconitine more on the heart.—B.M.J.ii./81, 523; Trans. Med. Congress, 1881,i.472.

Letter on the varieties of commercial aconitine, noting the extreme variation of their therapeutic power and poisonous properties, cases of poisoning produced by the substitution of one maker's aconitine for another's, referred to.—B.M.J. i./82,555.

Investigation of Dutch case of poisoning by aconitine. —P.J. 1882,683.

Actæa.—See Cimicifuga, p. 84.

ÆTHER.

Ether (*Off.*).

Syn.—ÆTHER SULPHURICUS; SULPHURIC ETHER; OXIDE OF ETHYL.

Dose.—20 to 60 minims (best given as spirit of ether, which mixes with water).

Chemically ether is alcohol less a molecule of water. Its properties and general medical uses are so well known as to need little description here. Besides its ordinary medicinal uses, ether is now largely employed for producing general anæsthesia, as well as being applied as a local anæsthetic in the form of spray to freeze the part. In causing general anæsthesia ether produces less depression on the heart than either dichloride of ethidene or chloroform, but its use is unpleasant both to the patient and to the operators. Its suffocating action on the patient, if suffering from any lung or bronchial affection, is very irritating, and has proved fatal. Care must be taken not to employ it near a light, as its vapour is very inflammable, and it has to be used freely.—*Vide* letters and report on anæsthetics, in which ether is preferred to chloroform. — B.M.J. ii./75,726; B.M.J. ii./80,760, 776,970; B.M.J. i./82,247.

Revelations following anæsthesia from ether.—L. ii./81,9.

Action on the frog's heart, induces very little paralysing effect.—Pr. xxvii.13.

Hypodermically, 20 minims acted as a successful restorative in typhoid fever.—L. ii./83,313.

Also 30 minims hypod. for collapse from post partum hæmorrhage, patient rallied in a few minutes.—L. ii./83, 348, 388.

For surgical collapse, hypodermic dose may be up to a drachm.—L. ii./83,395.

Commercial Varieties in General Use.

(1) *From pure Rectified Spirit.*

Æther (*Off.*) Sp. Gr. 0.735.

Ordinary medicinal ether contains a little spirit and water. It is sometimes inhaled for producing general anæsthesia, but is not so suitable for this purpose as

Æther Purus (*Off.*). Sp. Gr. 0·720; **Absolute Ether.**

This is best adapted for producing general anæsthesia. It is a pure and definite substance. It may also be used for local anæsthesia.

(2) *From Methylated Spirit.*

Absolute Ether, Methylated, Sp. Gr. 0·717 to 0·719.

Contains a little methylic ether, and is specially adapted for producing local anæsthesia, as it boils under 80° F. It is not adapted for producing general anæsthesia, being too volatile.

Pure Ether, from Methylated Spirit, Sp. Gr. 0·720.

Methylated ether, well washed to free it from methylic ether, purified and re-distilled. It is well adapted for producing general anæsthesia. Is considered safer than that from pure spirit.—L. i./82,1072.

Methylated Ether, Sp. Gr. 0·730.

Is adapted for common purposes, ice machines, &c. Not fit for medical use.

Preparations.

Æther Phosphoratus.—See p. 203.

Collodium.—See p. 96.

Perles of Ether, contain about 3 minims in each.

Dose.—1 to 4.

Spiritus Ætheris (*Off.*).

Ether, Sp. Gr. 0·735... ...	1 ounce.
Rectified Spirit	2 ounces.

Dose.— 30 to 90 minims.

The older formula is often ordered, viz.:—

Spiritus Ætheris Compositus, P.L.

Ether Sp. Gr. 0·750	8 ounces.
Rectified Spirit	16 ,,
Ethereal Oil	3 drachms.

Dose.—30 to 90 minims.

This was known as Hoffmann's Anodyne Liquor, but the simple Spirit of Ether is now called Hoffmann's Anodyne in the Continental Pharmacopœias.

ÆTHYL BROMIDUM.

Bromide of Ethyl.

Syn.—HYDROBROMIC ETHER.

Is prepared by distilling a mixture of alcohol, bromine, and phosphorus. It is a colourless, very volatile liquid with a strong peculiar odour and a sweetish warm taste. It has Sp. Gr. 1·419, boils at 105° F. On keeping, it is liable to liberate free bromine.

It has been used, particularly in America, as an anæsthetic, as has also a mixture of Bromide of Ethyl 1 part, Chloroform 3 parts. and Alcohol 4 parts. Also inhaled to relieve migraine.

Produces anæsthesia in 2 or 3 minutes. Its odour remains longer in the breath of the patient than ether or chloroform; it does not irritate the respiratory passages, and it causes less excitement and tendency to struggle than ether or chloroform.—L. i./80,981; B.M.J. i./80,601; Pr. xxiv.384.

Notes and letter on its use for anæsthesia,—one death from, patients manifest a great dislike to its odour.—B.M.J. i./80,565,586,983; M.R. 1880,273.

Useful and safe as a general anæsthetic—is not such a depressent as chloroform; and as a local anæsthetic in neuralgia.—Trans. Med. Cong. 1881,i.449; B.M.J. ii./82,934.

Notes of 15 cases of anæsthesia and its characteristics; is safe as an anæsthetic can be, rapid in its action and pleasant in its effects, and is not inflammable.—Glasgow Med. Jour. March 1880,259.

For local anæsthesia, recommended as spray or simply short covered contact, not necessary to freeze the part all feeling ceases. Is of great service to dentists.—L. i./82,212.

Physiological experiments with.—As an anæsthetic it appears to be as safe as ether, and certainly more so than chloroform.—P.J. 1880,3.

Action on self—inhaled on three occasions.—B.M.J. i./84,812.

ÆTHYL IODIDUM.

Iodide of Ethyl.

Syn.—Hydriodic Ether.

May be obtained by distilling a mixture of alcohol, iodine, and phosphorus. It is a colourless liquid, but liable to become coloured by setting free iodine. It has a penetrating ethereal odour; boils at 148° F., has Sp. Gr. 1·94; is not inflammable. When dropped on red-hot charcoal, it gives off a purple vapour. It is dissolved by alcohol and ether, but not readily by water.

It is useful inhaled as an anæsthetic to relieve the dyspnœa of bronchitic asthma and œdematous laryngitis.

Preparation.

Iodide of Ethyl Capsules.

Encased in cotton wool and silk, containing 5 minims in each.

The glass capsule is snapped, the fluid absorbed by the wool, &c., and inhaled for four or five minutes. This may be repeated 3 or 4 times a day.

References.

Increases the bronchial secretion, stimulates the respiratory centres;—5 cases of paroxyms of asthma quickly relieved; of advantage in cardiac and laryngeal dyspnœa.—P. xxi.446; M.T.G. i./78,149.

Useful for inhalation in œdema of the glottis from catarrhal laryngitis.—Pr. xxiii,136.

Acts as an antispasmodic in spasmodic asthma and certain forms of nervous dyspnœa: iodine can be detected in the urine 10 minutes after inhalation, and as long as 30 hours after.—Pr. xxv.459.

Inhaled 3 times a day, a woman lost her cough well as her asthmatic attacks.—L. i./79,220.

The ether in the glass capsules is remarkably pur containing hardly a trace of free iodine, and, as it protected from light and air, it is likely to keep. course, the patient requires no assistance, and can ta one of the capsules from the bed side, even in the dark.— L. ii./79,879.

Iodide of Ethyl has been much recommended for inhalation in asthma, in which cases, it seems to give great relief. M. Sée is very enthusiastic in its praise. It is provided in small capsules, of very thin glass enclosed in silk. Thus, by crushing a capsule, the vapour may be inhaled without risk of excess or any sort of danger or even inconvenience. Like nitrite of amyl (which has been most efficacious in relieving the dyspnœa of advanced phthisis as well as of angina pectoris), the uses of the inhalation of Iodide of Ethyl will be extended, now that this convenient mode of administration has been provided.—B.M.J. i./80,21.

AGARICUS ALBUS.

White Agaric.

Syn.—POLYPORUS OFFICINALIS; BOLETUS LARICIS; FUNGUS LARICIS; LARCH OR PURGING AGARICUS.

Dose.—10 to 30 grains.

In white irregular pieces, deprived of the outer rind, the size of the fist or larger; is light, spongy, friable, but not easily powdered, odour faint, taste sweetish, afterwards acrid and bitter.

Under the name of Agaricus are sold preparations of the fly agaric, *Amanita Muscaria* (see Muscarine), from which the White Agaric must be carefully distinguished.

Analyses give discrepant accounts of agaricin, agaric acid, fungin or fungic acid, boletic acid, resins, &c., contained in *Agaricus albus*.

Agaricin, a white crystalline powder, is recommended in doses of $\frac{1}{12}$ to $\frac{1}{6}$ grain.

Agaric is in large doses a purgative, small ones an astringent, given to check night sweating (M.R. 1879,267; Pr. xxiii.209) and diarrhœa, to diminish bronchial secretion, and to dry up the milk after weaning.

For night sweats dose of $\frac{1}{18}$ grain in pill acts in about 6 hours.—L. i./84,405.

Preparations.

Extractum Agarici.

Prepared with rectified spirit.

Dose.—3 to 6 grains in pill.

Tinctura Agarici.

1 in 10 of proof spirit.

Dose.—20 to 60 minims.

In night sweating, 3 grains of extract in pill, 2 at bed-time, generally checked, at times they purged.—Pr. xxix.321.

ALDEHYDUM DILUTUM.

Diluted Aldehyde, T.H.

A mixture of spirit and Aldehyde (Acetaldehyde) containing 15 per cent. of the latter. Aldehyde is an oxidation product of alcohol preceding the formation of acetic acid, into which, if in the pure state, it readily passes. Diluted Aldehyde is a colourless liquid neutral to test papers, having an ethereal suffocating odour, producing spasm of the glottis when respired.

Vapor Aldehydi, T.H.

Diluted Aldehyde 80 minims, water to 1 ounce.

A teaspoonful to a pint of water at 140° for an inhalation.

Useful in recent catarrhal congestions and in ozœna.

Paraldehydum, Paraldehyde.

Dose.—30 to 50 minims, in diluted syrup or almond mixture, repeated if needed in ½ an hour.

A colourless liquid at the ordinary temperature, although it, like glacial acetic acid, crystallizes if cooled below 50°F. Sp. Gr. 0·998, may be obtained by treating Aldehyde with dilute sulphuric or nitric acid. Its odour and taste somewhat resemble Aldehyde, but it does not cause the same suffocating action when respired. Soluble 1 in 10 of water. It and its solid congener **Metaldehyde** are polymers of Aldehyde. Metaldehyde is in permanent acicular crystals, insoluble in water.

It resembles chloral in its physiological action, but differs from it in strengthening the heart's action, while it diminishes its frequency. It greatly increases the flow of urine, but does not affect the skin, nor does it give rise to digestive disturbances, to headache, or other unpleasant symptoms.—B.M.J.i./83,215,956; L. ii./83 344.

ALOIN.

Syn.—BARBALOIN.

Dose.—1 to 4 grains in a pill with hard soap.

A crystalline principle obtained by evaporating an aqueous solution of Barbadoes aloes acidulated with hydrochloric acid and freed from resin, and setting aside to cool. The crystals obtained are recrystallized from a weak spirituous solution. Aloin occurs in odourless lemon-yellow crystals, having the characteristic taste of Barbadoes aloes; is sparingly soluble in cold water, about 1 in 60; freely so in alcohol. Socaloin, Nataloin, and Zanaloin, obtained respectively from Socotrine, Natal, and Zanzibar aloes, though not identical, are homologous with Barbaloin. — M.T.G. ii./76,177; P.J. 1875,208; P.J. 1876, 70.

The purgative properties of aloes are due to these crystalline principles and to uncrystallizable matter soluble in water, nearly allied to them. For hypodermic injection a warm aqueous solution of Aloin may be used.

Barbaloin is aperient in doses of 2 grains, and causes less griping than crude aloes.—M.T.G. ii./76,177.

AMMONII CHLORIDUM.

Chloride of Ammonium (*Off.*).

Dose.—5 to 20 grains.

The pharmacopœia describes, and orders to be used, the commercial salt, in tough translucent fibrous masses A purer salt, prepared by dissolving the above in water, filtering, and evaporating until snow-white granular crystals are obtained, is now generally used by pharmacists. Liquid extract of liquorice disguises its nauseous taste.

Trochisci Ammonii Chloridi, T.H.

Contains 2 grains of the salt in each, with black currant paste as a basis.

Dose.—One every 3 hours; useful in congestion of the pharynx and larynx, loss of voice arising from cold and bronchial cough.

AMMONII IODIDUM.

Iodide of Ammonium, U.S.

Dose.—3 to 10 or 20 grains.

A white granular salt, in minute crystalline cubes, very deliquescent and soon becoming yellow or yellowish-brown on exposure to air; odourless when white, with a sharp saline taste and a neutral reaction. Soluble 1 in 1 of water, 1 in 9 of rectified spirit. Should be kept from light and air, else free iodine is quickly liberated. It causes less depression than iodide of potassium, and is sometimes preferred to the latter for syphilis and rheumatism.

AMYL NITRIS.

Nitrite of Amyl (*Off.*).

Dose.—By inhalation, the vapour of 2 to 5 minims. By the mouth ½ to 1 minim.

A yellowish ethereal liquid with a peculiar not disagreeable odour; produced by the action of nitric or nitrous acid on pure amylic alcohol.—Sp. Gr. 0·877; boiling point 205° F., but is difficult to obtain uniform; soluble in spirit, insoluble in water. It deteriorates by exposure to the air and becomes comparatively inert.

In 30 to 40 seconds after inhaling or swallowing dose it flushes the face, and increases the heat an perspiration of the head and neck.

It has been successful in relieving angina pectoris, sea-sickness, ague, spasmodic asthma, migraine, neuralgi dysmenorrhœa, post-partum hæmorrhage, as an antido to chloroform, to ward off epileptic attacks, and for th spasm of false croup and whooping-cough.

Preparations.

Capsules of Nitrite of Amyl.

Encased in cotton wool and silk, containing 1, 2, 3, 5 minims.

In use the glass capsule is broken, the liquid soaks t cotton wool and silk cover, and can be inhaled mo conveniently. For practical purposes the 3-minim si meets all wants.—L. ii./78,89; B.M.J. i./78,452.

stura Amyl Nitritis.

Nitrite of Amyl ... ... 16 minims
Rectified Spirit ... ... 2 drachms.
ix and add to Powdered Tragacanth (contained in a dry 2 ounce phial) ... ... 6 grains.
hen add gradually
Distilled Water ... to 4 ounces.
hake well.

ose.—1 or 2 drachms; is useful against sea-sickness.

lycerine Mixture — Nitrite of Amyl, 36 ims; Alcohol (0·83), 6 drachms; Glycerine to 1½ ces. *Dose.*—One teaspoonful in warm water, taken wly.—Asclepiad, 1884,166.

For the treatment of angina pectoris 5 drops inhaled; physiological action occurs in 30 to 60 seconds.—ii./67,97; L. ii./75,445; M.T.G. ii./70,272,321; T.G. ii./76,17.

In ague, on the onset of the cold stage, 5 minims haled cuts short the attack and checks the recurrence the paroxysms.—L. i./78,37,185,445; L. ii./78,693.

As an antidote to chloroform 3 minims inhaled.—i./75,644; B.M.J. i./79,969; Br. ii./79,xxi.

Very useful in sea-sickness, 3 drops (from a glass psule) inhaled and repeated every 2 or 3 hours if cessary. — L. i./79,650,687,759; L. ii./79,212,226, 5,301,303.

In post-partum hæmorrhage, 5 minims inhaled restored tient from collapse.—B.M.J. ii./79,691.

To restore animation a dose should be given in doubtl cases of death, either drowning, hanging, fainting, or r of being buried alive.—B.M.J. i./79,863.

In tetanus inhale a dose in every spasmodic seizure to in time.—M.T.G. i./70,472; L. i./74,871.

Relieves infantile convulsions ¼ to ⅓ minim in alcoholic lution given on sugar.—L. i./82,667.

Is a powerful agent to relax uterine spasms and hourss contraction, whether natural or caused by ergot.—M.J. i./82,377.

Ten per cent. solution in spirit may be given hypormically for colic and acute lumbago.—B.M.J. /82,817.

Its use in anæmia and imbecility.—Pr. xxvi.290.

Recommended as a domestic remedy for the various aches and pains of every-day life, externally for stomachache, colic, toothache, and neuralgia, and inhaled in hemicrania, chlorotic dysmenorrhœa, dizziness, faintness, threatened paralysis of the heart and asphyxia from drowning or hanging.—Pr. xxviii.139.

In uræmic asthma, Nitrite of Amyl capsules found useful.—B.M.J. i./83,811,956,1064,1115.

ANACARDIUM.

Anacardium Occidentale; Cashew Nut.

The pericarp of this reniform-shaped nut contains a quantity of acrid, caustic and vesicating, oily liquid, which produces a dark-coloured stain and an eczematous inflammation of the skin. This liquid has been employed as a specific for leprosy, and as an application for ringworm, corns, and obstinate ulcers, yet three or four drops may be swallowed without marked effect. It is given internally as a vermifuge. It consists of about 90 per cent. of Anacardic acid and 10 per cent. of Cardol. To the latter the vesicating properties are probably due. The kernels of the nuts are edible.—P.J. 1845,268; P.J. 1882,708.

Preparation.

Tinctura Anacardii.—Tincture of Cashew Nut. 1 in 10 of rectified spirit.

Dose.—2 to 10 minims.

The Marking-Nut obtained from *Anacardium officinarum* contains a similar fluid in the pericarp, and possesses similar properties.

ANTHEMIDIS FLORES.

Chamomile Flowers (*Off.*).

In addition to the official Extract, Infusion and Oil, the is prepared from the flowers of *Anthemis nobilis*:—

Tinctura Anthemidis.

Chamomile Flowers, single and fresh	1 pound.
Rectified Spirit	24 ounces.

Macerate a week, press out the liquid, and add to th mass

Distilled Water	8 ounces.

Digest 24 hours; press again; and add the liquid ressed out to the first liquid obtained; set aside a week nd filter.

Dose.—3 to 10 minims, or more.

Chamomile infusion or tincture in small doses is seful in summer diarrhœa of children, often occurring uring teething, and in which there are green, many-loured and slimy stools; it quiets their peevishness.—R.

ANTHOXANTHUM.

Anthoxanthum odoratum; Sweet Vernal Grass.

The flowers of this owe their odour on drying to oumarin. Their pollen is said to be principally the ause of hay-fever, and accordingly, by those who believe n *similars*, a tincture of the plant has been used, internally and locally as a lotion, for this troublesome disease.

Preparation.

Tinctura Anthoxanthi.

One of fresh-flowering herb in 10 of spirit 40 O.P. making allowance for the moisture the plant contains.

Dose.—2 to 6 minims.

ANTIMONII CHLORIDUM.

Chloride of Antimony.

Syn.—Trichloride of Antimony.

When pure is in colourless crystals, or translucent crystalline masses, known as butter of antimony. It is very corrosive; on addition to water, it decomposes into free hydrochloric acid and basic oxychloride of antimony, powder of Algaroth.

Liquor Antimonii Chloridi (*Off.*).

A heavy caustic liquid of a yellowish red colour; Sp. Gr. 1·47. It is coloured by impurity, perchloride of iron often added intentionally. It can be obtained colourless. Chloride of antimony is a useful caustic and desiccating escharotic, does not cause much pain.

APIOL.

Dose.—3 to 6 minims, in perles.

A liquid preparation obtained from, and containing the active properties of the root of *Apium Petroselinum* common parsley. It is a green oily liquid, with a peculiar odour and a pungent taste like parsley, is not miscible with water, but dissolves readily in alcohol and ether. A stearoptene in light, colourless, acicular crystals, only slightly soluble in water, is also known by the name of **Apiol.** It has been employed as an antiperiodic for ague, and also for amenorrhœa and dysmenorrhœa. As its odour is strong and persistent, it is best administered in the form of

Perles of Apiol.

Dose.—1 or 2, contain 3 minims in each.

Had decided efficacy in primary amenorrhœa or deficiency of secretion, as well as in accidental suppression and in dysmenorrhœa, a perle given night and morning for 4 or 5 days during the epoch.—M.T.G. i./61,97.

APOCYNUM CANNABINUM.

American Indian Hemp.

Syn.—Apocynum, Canadian Hemp, U.S.

Dose of root in powder.—1 to 20 grains.

From the root of this is prepared,

Tinctura Apocyni Cannabini.

1 in 10 of proof spirit.

Dose.—5 minims to a drachm..

American Indian Hemp is a powerful emetic and diaphoretic in large doses; it also acts as a cathartic, anthelmintic, and diuretic, useful in dropsy and Bright's disease.

Considered one of the best diuretic and hydragogue cathartics, a small quantity produces diuresis, emesis, or catharsis; it has an agreeable aromatic taste and also ssesses tonic properties.—Pr. xxviii.62.

APOMORPHIÆ HYDROCHLORAS.

Apomorphia Hydrochlorate.

Dose.—$\frac{1}{32}$ to $\frac{1}{16}$ as an expectorant; $\frac{1}{12}$ to $\frac{1}{4}$ grain as an emetic by mouth, $\frac{1}{25}$ to $\frac{1}{6}$ grain hypodermically.

A derivative of morphia or codeia obtained by heating them with an excess of hydrochloric acid and without access of air. Apomorphia is morphia deprived of a molecule of water. In commerce the hydrochlorate occurs in minute pale greyish, white, aeicular crystals, soluble 1 in 7 of water, but the solution turns emerald-green in colour, but loses little of its medicinal powers. Insoluble in ether and chloroform.

It gives with perchloride of iron a dark purple amethyst coloration, with nitric acid a brucia-red, and with bichromate of potash and sulphuric acid a strychnia-red.

It acts as a non-irritant emetic and powerful anti-stimulant. Small doses are expectorant.

Injectio Apomorphiæ Hypodermica.

Hydrochlorate of Apomorphia	2 grains.
Distilled Water	100 minims.

Dissolve and filter.

Dose.—2 to 8 minims. If required to be kept for use, it is better to add a grain of absolute phenol to it, and exclude from the light.

Trochisci Apomorphiæ are prepared $\frac{1}{50}$ grain in each combined with chocolate.

Never failed to produce vomiting by a single dose, one-fifth of a grain by the mouth or one-tenth of a grain hypodermically. The vomiting seems to put an end to itself; there is no subsequent nausea, nor is it followed or accompanied by any ill effects.—Trans. Clin. Soc. ii./69,166; M.T.G. ii./79,592.

Causes free vomiting, followed by sleep.—B. & F. M. Ch. Rev., 1875,503.

In a case of poisoning by carbolic acid of great use as an emetic.—Pr. xix.377.

To prevent epileptic attacks.—Pr. xx.57.

Œsophagus obstructed by plum-stone, by injecting apomorphia hypodermically the vomiting caused its removal. Useful as an emetic in poisoning or stomach overloaded.—Pr. xxi.375.

As an emetic and depressent in alcoholic intoxication, and poisoning, with essential oil of bitter almonds and carbolic acid, cases recovered.—Stillé and Maisch.

In sunstroke one-sixteenth of a grain injected caused emesis in less than ten minutes, temperature was reduced, skin became slightly moist, pupils dilated, whilst sensation and movement returned within half an hour.—Pr. xxiv.456.

Summary of physiological action.—Pr. xxiv.367.

Hysterical coma, one-tenth of a grain cured.—B.M.J. i./80,477.

Useful as an expectorant in bronchitis and catarrhal pneumonia of children.—Pr. xxvii.285.

Two cases of poisoning treated by hypodermic injections of apomorphia, one alcoholic, recovered, the other by oxalic acid, was fatal.—L. i./83,1073.

As an expectorant $\frac{1}{20}$ grain every 2 hours is useful, or, given with the same quantity of morphia every 2 or 4 hours, it lessens cough and increases fluidity of sputa.—M.R. 1882,483,497.

Is a safe, certain, and quick emetic.—B.M.J. i./83,907.

In carbolic acid poisoning $\frac{1}{8}$ grain hypod. injected emptied stomach, recovery followed.—L. ii./83,280.

ARGENTI NITRAS.

Nitrate of Silver (*Off.*).

Syn.—Lunar Caustic.

Dose.—$\frac{1}{6}$ to $\frac{1}{3}$ grain or more in a pill, best with kaolin ointment as an excipient—*not* with bread crumb,—this contains common salt, which decomposes it.

Mitigated Nitrate of Silver is prepared of various strengths by fusing together nitrate of silver 1 to 1, 1 to 2, or 1 to 3 of nitrate of potassium, for the use of oculists and surgeons, and tough caustic points are sold containing about 5 per cent. of the potash salt.

Antidote to nitrate of silver—common salt given in some demulcent drink. Salt is also used to arrest its action locally as a caustic.

ASPARAGIN.

Syn.—ALTHEIN.

Dose.—1 to 2 grains.

In hard crystals, which are transparent colourless right rhombic prisms, having a slightly acid reaction.

May be obtained from *Asparagus officinalis*, and the roots of marshmallow, liquorice, belladonna, &c. Soluble 1 in 12 of cold water, dissolves in acid and alkaline solutions. Insoluble in absolute alcohol and ether.

For cardiac dropsy and chronic gout one grain is given three times a day as a diuretic in combination with bromide of potassium.—P.J. 1879,243.

ATROPIA (*Off.*).

Atropine.

Dose.—$\frac{1}{120}$ to $\frac{1}{60}$ grain increased to $\frac{1}{16}$, or in acute mania to $\frac{1}{8}$ grain or more.

An alkaloid obtained from *Atropa Belladonna*. It is generally in hard white acicular prismatic crystals or crystalline masses, strongly alkaline, soluble 1 in 500 of water, 1 in 8 of rectified spirit, 1 in 36 of ether, 1 in 3 of chloroform, 1 in 40 of olive oil, very soluble in glycerine and oleic acid. Being so insoluble in water, it is not suitable for internal use,—generally given as a sulphate.

In commerce a kind of atropine is sometimes met with in light acicular crystals not quite so white as, but resembling, sulphate of quinine in appearance; although obtained from belladonna, this consists according to Ladenburg principally of pure hyoscyamine. His researches prove that the three mydriatic pure alkaloids, Atropine Hyoscyamine, and Hyoscine, are contained in the plants as follows :—

Atropine occurs in Atropa Belladonna.
,, ,, ,, Datura Stramoninm.
Hyoscyamine ,, Atropa Belladonna.
,, ,, ,, Datura Stramonium.
,, ,, ,, Hyoscamus niger.
,, ,, ,, Duboisia myoporoides.
Hyoscine ,, ,, Hyoscyamus niger.

“Heavy daturine” is identical with atropi “light daturine” and “light atropine” are identical with hyoscyamine. Duboisine is nearly pure hyoscyamine. Pure atropine and pure hyoscyamine as well as hyoscine are isomeric alkaloids, but possess different chemical and physical characters. By the action of baryta water both

Atropine and Hyoscyamine split up into Tropic Acid and Tropine.

Hyoscine splits up into Tropic Acid and Pseudotropine.

Tropine and tropic acid may be recombined und certain conditions to form Atropine, or tropine may b combined with other acids such as salicylic or amygdal acid to form salts. These salts when treated wi diluted hydrochloric acid form a class of artifici alkaloids, to which the generic name of *tropeines* given. One of these so produced from the amyg of tropine is homatropine or oxytoluyltropeine. body will, like Atropine, form salts with acids.— Annalen, vol. ccvi.307.

Salts of Hom[illegible]**ne.**—See p. 5

The writer f [illegible] commercial
and Hyoscya [illegible] d diffe
in regard [illegible] the
alkaline, [illegible]
Atrop [illegible]
a mar [illegible]
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G [illegible]

Preparations of Atropine.

Atropiæ Sulphas (*Off.*).

Dose.—$\frac{1}{120}$ to $\frac{1}{40}$ grain increased to $\frac{1}{16}$, or in cases of acute mania $\frac{1}{8}$ grain.

In masses of opaque white minute crystals, or—prepared according to the pharmacopœia—a colourless powder, soluble 1 in 4 of water. The crystallized preparation is much to be preferred.

Salicylate, as well as **Valerianate** of **Atropine,** is sometimes used.

The solution of the salicylate is said to have special advantages in not undergoing change by keeping. Soluble 1 in 20 of water.—Br. i./81,lxii.

Discs of **Atropine** are prepared of various strengths for ophthalmic use. The ordinary contain $\frac{1}{5000}$ grain of the sulphate in each.

Injectio Atropiæ Hypodermica.

Sulphate of atropine, 4 grains to the ounce of distilled water.

Dose.—1 to 4 minims, or more.

Injectio Morphiæ et Atropiæ Hypodermica.—See Morphia, p. 178.

Linimentum Atropiæ.

Atropine	4 grains. (more or less, if ordered).
Oleic Acid	1 drachm.
Castor Oil	1 drachm.
Oil of Lavender	5 minims.
Rectified Spirit to ...	1 ounce.

In lumbago and other rheumatic affections is very rviceable used with gentle friction; it is readily sorbed.

quor Atropiæ (*Off.*).

Atropine 4 grains dissolved in 1 drachm of rectified rit and added to 7 drachms of distilled water. A very atisfactory preparation; it is not a perfect solution, and en used for the eye the spirit it contains is irritating.

quor Atropiæ Sulphatis (*Off.*).

Sulphate of atropine 4 grains, in distilled water unce.

Dose.—1 to 4 minims, or more.

Is much used for ophthalmic purposes. The sulphate should not be acid, else the solution will be irritating to the eye. It is better to use the crystallized salt, a solution of which is much more stable than that of the B.P. salt. In many cases in which it is used for the eye this solution is much too strong, as it is apt to produce glaucoma.—B.M.J. ii./82,93,178,193.

The ordinary Guttæ Atropiæ Sulphatis of the Royal Ophthalmic Hospital Pharmacopœia have one grain of salt to the ounce.

Oleatum Atropiæ.

Atropine	5 grains.
Oleic Acid	200 minims.

Heat in a water bath till dissolved. Perfume with otto of rose, or lavender, if preferred.

Useful to paint on painful parts.

Pessaries of Atropine are prepared with oil of theobroma, containing generally about $\frac{1}{20}$ grain of the alkaloid in each.

Pilulæ Atropiæ.

Atropine...	$\frac{1}{80}$
Sugar of Milk	$\frac{3}{4}$ grain.

Triturate, add

Glycerine of tragacanth... ...	*q.s.*

And make one pill. Taken at bedtime, to check night-sweating. Is apt to cause dryness of the throat.

Unguentum Atropiæ (*Off.*).

Atropine 8 grains, dissolved in $\frac{1}{2}$ drachm of rectified spirit, and mixed with an ounce of lard.

Unguentum Atropiæ cum Vaselino.

Atropine (pure alkaloid) ...	8 grains.
Vaseline	8 drachms.

Heat carefully till dissolved. N.B.—Sulphate of Atropine is not soluble in vaseline.

This forms a definite, convenient, and economical mode of applying atropine to the eye. A little may be placed within the lower lid. It produces no irritation. For some purposes it will bear dilution.—Br. ii./82,xci.

As a mydriatic the uses of atropine are well known. —B.M.J. ii./79,364.

Atropia and belladonna either given internally, hypodermically, or used externally, diminish perspiration, and will check this when excessive, as in the night sweats of phthisis and other wasting diseases; should be used locally for profuse sweating of the hands, feet, or other parts; also for leucorrhœa and uterine discharges. They likewise check the secretion of milk and saliva, and antagonise such drugs as jaborandi, opium, Calabar bean, muscarin, aconite, bromal, and prussic acid.—R.

In night-sweating, $\frac{1}{200}$ to $\frac{1}{80}$ grain may be increased to $\frac{1}{25}$ grain, taken at bedtime. Is apt to cause dryness of the throat, and is not so useful for this purpose as picrotoxin or pilocarpine.— Pr. ix.91,224; Pr. xxiii.93.

Causes sleep in acute mania in dose of $\frac{1}{4}$ to 1 grain of sulphate.—Pr. xviii.166; R.

Physiological experiments on antagonism to morphia.—Pr. xviii.356.

Antagonism to pilocarpine.—L. ii./79,479.

One grain of sulphate of atropine subcutaneously injected cured a case of poisoning by laudanum (equal to 12 grains of opium).—L. i./78,354; B.M.J. i./78,267

A case of poisoning by $2\frac{1}{2}$ grains of sulphate of atropine was entirely cured by 16 centigrammes of hydrochlorate of pilocarpine given in centigramme doses every 5 or 10 minutes.—B.M.J. i./80,366; P.J. 1880,771.

Use of hypodermic injection of atropine previous to the administration of chloroform as an antidote to the cardio-inhibitory effects of chloroform.—B.M.J. ii./80,620,715 761.

Atropine $\frac{1}{20}$ grain is antagonistic to 1 grain of morphia. In cases of poisoning small doses should be frequently injected hypodermically, and the poison eliminated by drawing off the urine with a catheter frequently.—B.M.J. i./81,239; Pr. xxvi.128.

Case of poisoning by 6 drachms of tincture of opium, treated with two hypodermic injections of sulphate of atropine, with recovery.—L. i./79,843.

Belladonna poisoning successfully treated by hypodermic injection of extract of physostigma.—B.M.J. i./81,918.

In iritis Atropine is indicated, in glaucoma Eserine.—Pr. xxxi.321.

Poisoning by opium (laudanum and paregoric) equal to 18 grains of dry opium, after other remedies had failed, recovered by injecting hypodermically $\frac{1}{80}$ grain doses of sulphate of atropine.—B. M.J. i./84,605.

Homatropine Salts in use are the **Hydrobromate, Hydrochlorate, and Salicylate.** They are in minute granular crystals, and are soluble 1 in 20 or less of water. They are costly.

Dose of each.—$\frac{1}{120}$ to $\frac{1}{20}$ grain.

Hypodermic injection of the Hydrobromate, 1 in 120, is used. *Dose,* 1 to 6 minims. This solution or a weaker one may be used also as eye drops.

The mydriatic and general physiological properties of the Hydrobromate of Homatropine resemble, but in a weaker degree, those of atropine, excepting that it slows the heart's beats and renders them irregular in force and rhythm.—L. i./80,795.

Action in checking night-sweating inferior to atropine and picrotoxin. Large doses cause staggering gait, like atropine.—Pr. xxv.252.

It enlarges the pupil and paralyzes the ciliary muscles as quickly and thoroughly as an equally strong solution of atropine; but the effects of Homatropine disappear entirely in twelve to twenty-four hours, while the effect of atropine continues for many days, and while it lasts the patient is disabled from reading and writing.—B.M.J. i./82,523.

BALSAMUM GURJUNÆ.

Gurjun Balsam; Wood Oil.

Dose.—½ to 2 drachms.

A viscid balsam obtained from the trunk of the growing tree *Dipterocarpus turbinatus* and other species of this genus; imported from the East Indies. It is very fluorescent, has an opaque dingy, greenish grey colour seen by reflected light, yet is transparent and reddish brown in strong daylight; it has the weak aromatic odour and bitterish aromatic taste of copaiba without the acridity—has been used as an adulterant of copaiba. It is not completely soluble in either ether or alcohol; emulsified with mucilage of acacia, it is used with success like copaiba, for gonorrhœa; and, in the East, as a remedy for leprosy, an emulsion is made of equal parts of the balsam and lime-water, which is used freely as a liniment and given to the extent of 4 drachms three times daily.

BAPTISIN.

Dose.—1 to 5 grains in a pill with mucilage of acacia. The purified extract of wild indigo, *Baptisia tinctoria*, powdered; of a light brown colour.

Is a mild laxative in small doses, and a powerful emetic and cathartic in large:

It is a moderately powerful hepatic and intestinal stimulant on the dog.—Pr. xxiii. 337; B.M.J. ii./78,909.

BEBERIÆ SULPHAS (*Off.*).

Beberine Sulphate.

Dose.—1 to 10 grains, in pills, with glycerine of tragacanth, or in aqueous solution.

The sulphate of an alkaloïd obtained from Bebeeru bark, the bark of *Nectandra Rodiœi*, or greenheart-tree. Prepared according to the Pharmacopœia, it is in dark brown, thin, translucent scales with strong, bitter taste, soluble 1 in 80 of water, slightly in spirit. A Hydrochlorate of Beberine is also prepared, possessing similar properties and having a similar appearance. They are both impure salts. The pure salts crystallize with difficulty.

Used as a substitute for quinine in neuralgia, and as an antiperiodic. Very useful also in menorrhagia, 4-grain doses often repeated.—L. i./45,500; L. i./64,458; P.J. 1867,27.

BELLADONNA.

Deadly Nightshade (*Off.*).

The official preparations of *Atropa Belladonna* are made from the dried root, the dried leaf, and the extract from the fresh leaves and branches. The general properties of belladonna in dilating the pupil, and as a narcotic, applied externally or taken internally, are well known. Externally, its preparations are applied to relieve rheumatism, neuralgia, and as a general local sedative for pain. Internally, either alone or in combination with aloes, or sometimes with dried sulphate of iron, ⅛ to ¼ grain of the extract is much used for habitual constipation. It checks, and even suppresses, the secretions of the glands, causes dryness of the throat and of the skin, checks night-sweats, secretion of milk, nocturnal incontinence of urine in children and nocturnal emissions. Large doses produce delirium, a scarlatina rash on the skin, the face becomes flushed, and muscular power is weakened.—R. As a prophylactic to scarlet fever, 10 grains of extract of belladonna, dissolved in 6 ounces of water, are given in teaspoonful doses.

All parts of the plant contain the alkaloid atropine with, in addition, hyoscyamine.

Preparations.

Atropine.—See Atropia, p. 51.

Chloroformum Belladonnæ (Squire).

Powdered belladonna root, treated by percolation with chloroform to produce from one ounce of powder one fluid ounce of percolate.

Mixes with oils ; 1 to 3 olive oil is useful for painful rheumatic affections.

Emplastrum Belladonnæ (*Off.*).

Made by exhausting extract of belladonna with spirit, distilling off the spirit, and mixing the residue with resin plaster.

This is of a dark olive colour, and makes an adhesive, but generally too soft a plaster. It is apt to mess the patient's clothes. A much more useful and efficacious plaster is prepared as devised by the author in the University College Hospital Pharmacopœia, by mixing one part of alcoholic extract of belladonna root with 9 parts of lead plaster. It is very adhesive, of a reddish brown colour, and does not "run."

Emplastrum Belladonnæ Extensum (*American*).

Belladonna plaster in rubber combination spread on calico in porous sheets 7 in. by 5 in. and in yard rolls 7 in. wide, porous and non-porous.

Is efficacious, pliable, keeps well, and does not "run."

Similar plasters are also prepared with belladonna and aconite combined.

Extractum Belladonnæ (*Off.*).

Dose.—$\frac{1}{6}$ to $\frac{1}{2}$ grain, may be increased to 2 grains or more.

A green extract prepared from the expressed juice of leaves and young branches.

Extractum Belladonnæ Radicis.

Dose.—$\frac{1}{24}$ to $\frac{1}{4}$ grain, or more.

An alcoholic extract of the root is about five times as strong as the green extract of the leaves and branches, and is useful for making belladonna plaster, suppositories, and pessaries.

Glycerinum Belladonnæ.

Extract of Belladonna	...	1 ounce
Boiling distilled water	...	1 drachm or *q.s.*

Rub together in a warm mortar to produce a smooth paste, and add

Glycerine	... ...	1 ounce.

To check pain and inflammation, is often painted on boils, abscesses, and carbuncles, and, covered with a poultice, also applied on lint to the breasts to disperse the milk. The Royal Ophthalmic Hospital Pharmacopœia orders 3½ ounces of glycerine to the ounce of extract.

Linimentum Belladonnæ (*Off.*).

Prepared by percolating 20 ounces of powdered belladonna root with rectified spirit, dissolving in the percolate 1 ounce of camphor, and obtaining 1 pint of liniment. A useful topical sedative for neuralgia and rheumatic pains.

Linimentum Belladonnæ Compositum (Squire).

Belladonna Liniment	...	7 ounces.
Chloroform of Belladonna	...	1 ounce.

Sprinkled on impermeable piline or the textile side of American oiled cloth, and applied constantly, relieves lumbago.

Succus Belladonnæ (*Off.*).

Dose.—2 to 15 minims,

Expressed juice of leaves and branches with one-third of rectified spirit added.

Is about three times the strength of the tincture.

Hay fever relieved by one minim every hour.—B.M.J. i./83,69.

Suppositorium Belladonnæ.

Extract of Belladonna Root...	⅕ grain.
Oil of Theobroma	15 grains.

Often ordered to be made with the green extract, but it is almost impossible to get sufficient of this to combine with the basis to be of service. Pessaries may also be made with the extract of the root containing ⅕ to 1 grain in each.

Tinctura Belladonnæ (*Off.*).

Dose.—5 to 20 minims; contains 1 of leaves in 20 of proof spirit.

Unguentum Belladonnæ (*Off.*).

Green extract, 80 grains rubbed smooth with a little water, to an ounce of lard. Does not keep well.

BISMUTHI OXYCHLORIDUM.

Oxychloride of Bismuth.

Dose.—5 to 20 grains.

Is prepared by adding an acid solution of trichloride of bismuth to water, or by mixing a solution of true nitrate of bismuth with a solution of common salt. The basic oxychloride precipitated is well washed with water and dried. It forms the pigment known as "pearl white," and is much used as a cosmetic, to make "blanc de perles," &c. It gives a white pearly gloss to the skin. If carefully prepared, it is an impalpable, neutral, unirritating powder, and for many purposes should be preferred to the B.P. subnitrate (which is acid and crystalline), carbonate, or oxide. Even for internal administration, if most of the action of bismuth preparations be due to the mechanical coating they give to the irritated parts of the stomach or bowels, the oxychloride should be preferred, as, besides being an impalpable powder, it is a very insoluble one. It coats and adheres to the mucous membrane, and is very useful in irritated conditions of the mouth, throat, vagina, and rectum. From a quarter to half a grain may be used as an insufflation to the larynx.

Pessaries or **suppositories** may be made with oil of theobroma, containing 10 grains of the oxychloride in each.

Unguentum Bismuthi Oxychloridi.

Oxychloride of Bismuth ...	30 grains.
Vaseline	1 ounce.

Mix. Is useful for anointing the speculum previous to vaginal examinations.

Pulvis Bismuthi Compositus (Ferrier's Snuff).

Hydrochlorate of Morphia ...	2 grains.
Powdered Acacia	2 drachms.
Subnitrate of Bismuth ...	6 „

Mix. From a quarter to one-half the above to be used as snuff in 24 hours.—L. i./76,525.

BROMAL HYDRAS.

Hydrate of Bromal.

Dose.—2 to 5 grains—3 grains at bedtime for relieving pain or producing sleep.

In large oblique colourless prisms, which melt on the hand, and are not quite so soluble or readily soluble in water as chloral hydrate. Applied externally to the skin, it causes irritation and great infiltration of the tissue, as when dry cupping-glasses are used. It is not suitable for internal exhibition, as it causes pyrosis, vomiting, and diarrhœa.—B. & F. M. Ch. Rev. i./72,509.

It is much more active physiologically than chloral hydrate. Of the latter it required 20 grains to cause the death of a rabbit, whereas 4 or 5 of bromal hydrate are quite sufficient to kill one of the same weight.—B.M.J. ii./74,805.

In epilepsy, tried without success.—Stillé and Maisch.

BRYONIA.

Bryony.

Syn.—VITIS ALBA; WHITE BRYONY.

From fresh roots of *Bryonia alba* or *B. dioïca* a tincture is prepared corresponding in strength, to 1 of dried root to 10 of proof spirit. (U.S. orders 1 of dried root in 10 of rectified spirit.)

Dose.—1 to 10 minims or more.

Useful in pleurisy. Given in small doses, it relieves the pain and allays the cough. In large doses it is an active hydragogue cathartic, sometimes used for dropsy. The fresh plant applied to the skin will cause vesication. It contains Bryonin, a bitter principle, soluble in water and alcohol, insoluble in ether.

BRUCIA.

Brucine.

Dose.—$\frac{1}{12}$ grain increased up to $\frac{1}{2}$ grain.

An alkaloid obtained along with strychnine from the seed of *Strychnos Nux-vomica*, and other species of Strychnos. In small white acicular crystals, with bitter taste. Very soluble in alcohol, soluble 1 in 100 of chloroform, 1 in 850 of cold water. Its salts are more soluble in water. It, as well as morphia, gives an intense red colour with nitric acid, which strychnine, if pure, does not. Brucine is difficult to obtain perfectly free from strychnine. It is said to possess only $\frac{1}{24}$ the physiological power of strychnine.—P.J. 1877,652,666.

For epilepsy, has curative properties, given as liquor, same strength as liquor strychniæ, 10 minims twice a day, increased every third day by 5 minims, until half a grain is reached.—L. i./69,75.

Note on physiological action.—L. i./83,30.

Byne, and Extractum Bynes.

See Maltum, and Extractum Malti, p. 171.

CAFFEINA.

Caffeine.

Dose.—½ to 5 grains or more—as much as 18 grains being recommended—given in solution, or in pills with glycerine of tragacanth.

A crystalline principle obtained from coffee-seeds—*Coffea Arabica,* also contained in tea, guarana (p. 145), maté—the leaves of *Ilex Paraguayensis,* and kola nuts—the seeds of *Sterculia acuminata,* growing in Western Africa; it is identical with Theine and Guaranine. Caffeine and Theobromine (see p. 255) can be prepared from Xanthine (the former being di- and Theobromine trimethyl-xanthine) and indirectly from guano, as Xanthine may be obtained as a derivative of Guanine contained in guano. Caffeine is in slender needles like white silk, is soluble 1 in 100 of water, 1 in 25 of rectified spirit; is insoluble in absolute alcohol, but soluble in ether; acids render it more soluble in water, but it is a feeble base, and on concentrating the solution of the salts they are apt to split up, and the caffeine crystallizes out by itself. Caffeine has more nitrogen in its composition than any other known alkaloid. It has a bitter, not agreeable taste. It stimulates the heart and raises arterial tension. In excessive doses it causes rise of temperature, convulsions, and paralysis.

Caffeinæ Citras.

Dose.—½ to 5 grains or more.

In commerce this is met with in opaque white needle-like crystals or masses of crystals; it is a doubtful salt.

Effervescent Citrate of Caffeine is prepared, containing a grain in a teaspoonful.

Caffeinæ Hydrobromas.

Dose.—½ to 5 grains or more.

In acicular crystals, shorter than the citrate.

Caffeinæ Valerianas.

Dose.—½ to 3 grains.

In irregular crystals or powder, having the odour of valerian.

Caffeine is very soluble in aqueous solutions of benzoate, cinnamate, and salicylate of sodium. These dissolve it in chemically equivalent quantities. The following salicylate of sodium solution of it forms an unirritating hypodermic injection.

Injectio Caffeinæ Hypodermica.

Caffeine...	20 grains.
Salicylate of Sodium ...	17½ grains.
Distilled Water to ...	1 drachm.

Dose.—1 to 6 minims, contains 1 grain in 3 minims. Particularly recommended for alcoholic and morphia intoxication, also for hemicrania.

Caffeinæ Sodio-Salicylas.

Dose.—1 to 4 grains hypodermically.

A white amorphous powder, containing 62·5 per cent. of caffeine, and soluble 1 in 2 of water.

References.

On the dog, half a grain injected hypodermically raised the temperature. Artificial respiration removes the tendency to death from an overdose.—M.R. 1876,301.

It has an opposite effect to quinine on the temperature. Large doses raise it.—M.T.G. ii. 78,604.

Antagonism between caffeine, theine, guaranine, cocaine, as well as tea and coffee, and morphia and opium.—B.M.J. ii./74,615,674,697,771.

Useful in cardiac disease, especially where dropsy is a marked symptom. Is apt to induce insomnia. Large doses are required. It is better borne than digitalis.—L. ii./82,909; i./83,909.

In epileptic vertigo, after 1 to 3 grain doses three times a day, attacks cease.—Pr. xxx.105.

Theine, caffeine, and guaranine are chemically and physiologically identical. Excessive doses produce in animals paralysis of sensibility, tetanic spasm, and convulsions.—R.

A stomachic tonic, lessens tissue change, and waste. Has been given in cases of diarrhœa, phthisis, and neuralgia.—B.

Useful in unilateral headaches in doses varying from 1½ grain to 18 grains.—Binz.

Is a diuretic, and relieves cardiac dropsy in cases [illegible] a feeble, dilated, and irregularly contracting heart is undergoing progressive mural decay. Dose, 3 to 6 grains.—P. xxii.23.

Useful as a diuretic in dropsy depending on heart disease.—B.M.J. i./80,443.

A grain and a half of the valerianate three times a day checks nervous vomiting in hysteria. It increases appetite and nerve power. Is useful for pertussis.—M.R. 75,295.

Hydrobromate of caffeine is a diuretic, used hypodermically, and the citrate gives great relief in cardiac dropsy.—M.T.G. ii./77,662.

Is tonic and restorative to the nervous system, specially the sympathetic nervous system, may be given to relieve a palpitating adynamic heart, without fear of disturbing heart or vessels. One grain doses given for hemicrania and neuralgia. An ordinary cup of tea probably contains $\frac{1}{10}$ grain of Caffeine. With the addition of oxygen and the elements of water, Caffeine can yield taurine, about 2 grains giving to one ounce of bile the nitrogen it contains in the form of taurine.—M.T.G. ii./81,33.

1 to 5 grains in a cup of coffee relieve bronchial asthma.—L. i./79,220.

Caffeine acts on the heart in large doses like digitalis, but is apt to produce insomnia and nervousness.—L. ii./82,909.

Poisoning by 60 grains of citrate caused burning in throat, giddiness, violent vomiting, purging and diuresis, tremors of extremities, pain in stomach and bowels, and great thirst. Recovery: treated with nitro-glycerine, &c.—L. i./83,680.

CALCII CHLORIDUM.

Chloride of Calcium (*Off.*).

Dose.—10 to 20 grains in aqueous solution, or it is more palatable made into pills with syrup; these must be kept in bottles.

According to the pharmacopœia chloride of calcium, anhydrous and most convenient for use in medicine, is infused white agglutinated masses, dry, but very deliquescent. The porous dried chloride is better adapted for chemical purposes for absorbing water. Crystals of chloride of calcium are very deliquescent and unmanageable, as they dissolve in one-fourth their weight of water. Chloride of calcium is given in tubercular disease and glandul affections. It is not astringent. It has been recommended as a disinfectant.

References.

Chorea, eight cases in children, cured by doses of 7 to 15 grains daily.—M.T.G. ii./75,663.

In tubercular diseases, phthisis and all wasting diseases of children, has great power in controlling. For adults, dose 30 grains three times a day.—L. ii./77,275.

It is said to check the growth of uterine fibroids, some think it tends to cure them by aiding a process of calcareous degeneration.—L. ii./73,1.

In sarcinæ, the vomiting is checked by 30 to 60-grain doses.—M.T.G. i./60,401.

CALCII SULPHIDUM.

Sulphide of Calcium.

Syn.—MONOSULPHIDE OF CALCIUM; CANTON'S PHOSPHORUS.

Some forms of it after being heated shine in the dark and are used to make the luminous paint.

Dose.—$\frac{1}{10}$ to 1 grain in a pill.

Sulphide of Calcium is prepared by deoxidizing sulphate of lime, by mixing it with charcoal or some carbonaceous substance and heating the mixture in a crucible. The residue when powdered has a dirty white colour and slight sulphuretted odour; it is but sparingly soluble in water, which solution quickly decomposes, evolving sulphuretted hydrogen. In thus liberating this gas, sulphide of calcium possesses properties allied to the sulphurous springs of Harrogate, Barèges, Gilsland, &c. It is found very useful administered for boils, carbuncles, acne, scrofulous sores, especially in glands of the neck, by hastening maturation and preventing formation of fresh boils, &c. For boils, &c., $\frac{1}{10}$ grain is given every hour. For suppurating glands in the neck, $\frac{1}{4}$ to 1 grain every two hours, continued for weeks, is very beneficial.—R.

Pilula Calcii Sulphidi, gr. $\frac{1}{10}$, gr. ¼, gr. ½, and gr. 1.

These pills are best prepared by triturating the sulphide with sugar of milk, adding glycerine of tragacanth *q.s.*, rolling into pilules and coating with sandarach solution. Keep in bottles.

Dose.—1 every hour, or every 2, 4, or 6 hours as above, according to the state of the disease, whether acute or not.

On the addition of a dilute acid to Sulphide of Calcium mixed with water it gradually evolves sulphuretted hydrogen, and may be made use of for producing artificial sulphurous waters. The following imitates Aix-les-Bains water. Temperature 108° F.

Aix-les-Bains Water (Artificial).

Sulphate of Soda	2	grains.
Sulphate of Magnesia ...	1	grain.
Sulphate of Alumina ...	1½	grain.
Chloride of Sodium ...	½	grain.
Carbonate of Lime, precipitated	2	grains.
Sulphide of Calcium ...	3	grains.
Diluted Hydrochloric Acid	10	minims.
Water 108° F.	32	ounces.

Used for douching, baths, &c.

References.

Cases of acne of the face cured by ¼ to ½ and 1 grain doses 3 to 6 times a day.—L. ii./78,215.

Useful in boils and skin affections, also in diphtheria and croup—the false membrane is detached and expelled. L. i./82,296.

In cancer of the breast 3 cases, after operations and 3 or 4 months' treatment by grain doses of the sulphide, recovery was rapid.—L. ii./82,332.

In strumous ophthalmia, 5 cases, doses of $\frac{1}{10}$ to ¼ grain effected cures.—Pr. xxviii.17.

In periostitis and alveolar abscesses found of great service.—Stocken's Dental Mat. Med., 2nd ed., 143.

Lotio Calcii Sulphurati, U.C.H.

Slaked Lime	4 ounces.
Sublimed Sulphur	4 ounces.
Distilled Water	35 ounces.

Boil together, evaporate, and filter, to produce 1 pint of solution. This should be diluted with an equal quantity of warm water for painting over the patient, who ought previously to have had a bath, as a remedy for itch, which it will cure in half an hour. It holds in solution pentasulphide of calcium with some oxysulphide, and resembles in composition **Vlemingkx' Solution**.

CALENDULA.

Marigold.

From the fresh leaves and flowers of this plant, *Calendula officinalis*, a Tincture is prepared equal in strength to 1 of equal parts rectified spirit and water in 10 of the dried drug.

A lotion prepared from the tincture diluted, or an ointment prepared from tincture 1 part, and spermaceti or simple ointment 9 parts, is said to have a beneficial influence over wounds, especially incised wounds. It promotes cicatrization, with but little suppuration.

One minim of tincture with boracic acid 2 to 4 grains is a useful insufflation in otorrhœa.—Pr. xxx.366.

CAMPHORA

Camphor (*Off.*).

Dose.—1 to 10 grains in a pill, or alcoholic solution dropped on sugar or in water, or as camphor water. Camphor, besides being sold in bells, is now prepared in rectangular blocks, as well as in a sublimed powder, **Flowers of Camphor.** The latter is a very convenient form for making pharmaceutical preparations.

Camphor is soluble in water, 1 in 1,300 (more is dissolved if kept slightly warm), in rectified spirit 1 in 1¼ (more soluble in absolute alcohol), freely soluble in ether, chloroform, volatile and fixed oils. Camphor, when mixed in certain proportions with many crystalline substances, causes mutual liquefaction of the two—*e.g.*, camphor 4, phenol 12, and water 1 (see Acidum Carbolicum); camphor 1, and chloral hydrate 1 (see Chloral Hydras); camphor 2 and menthol 3 (see Menthol); camphor 1 and thymol 1 (see Thymol); camphor and croton-chloral hydrate liquefy when heated but solidify on cooling; so will camphor 84 and salicylic acid 65 (see Camphora Salicylata). Camphor is powdered by rubbing with a few drops of spirit. Besides the official preparations, camphor water* (camphor mixture) 1 in 1,000 to 1,300, liniment 1 in 5, compound liniment 1 in 9, spirit 1 in 10, and compound tincture 1 in 240, the following are in use:—

Camphor Ball.

Spermaceti, cut small	...	4 ounces.
White Wax ,,	...	12 ounces.
Oil of Almonds ...	...	5 ounces.

Melt in a water bath, and add

Flowers of camphor	...	4 ounces.

Dissolve, and when nearly cold pour into boxes or mould in gallipots. Useful for chapped skin.

Camphora Monobromata.—See p. 70.

Camphora Salicylata.—See p. 71.

Camphorated Chalk.

Flowers of Camphor ...	...	1
Precipitated Carbonate of Lime ...		7

Mix in a mortar, adding a few drops of rectified spirit, and sift for use as a dentifrice.

Elixir Camphoræ.

Dose.—½ to 1 drachm.

Spirit of Camphor	...	10 drachms.
Syrup	...	5 drachms.
Distilled Water ...	...	1 drachm.

Mix. Contains 4 grains of camphor in 1 drachm. It mixes and diffuses well in water.

Flowers of Camphor.—See p. 68.

Pilula Camphoræ.

The most suitable excipient to form camphor into pills is about ⅛ its weight of powdered curd soap and a few drops of proof spirit, or a little lard in a warm mortar.

* Aqua Camphoræ is uncertain in strength. The water dissolves much more of the camphor if kept in a slightly warm place. A definite quantity of camphor, dissolved in a small but certain quantity of spirit, and this added to a measured quantity of water, would make a more uniform preparation. It is rendered more soluble in water by the presence of carbonic acid, acid carbonate and carbonate of magnesia, sugar, and myrrh, and less soluble by bromide of potassium, liquor potassæ, sulphate of magnesia, alkaline carbonates, and many other salts.

Pilules and lozenges of camphor are prepared by confectioners, of uncertain strength.

Spiritus Camphoræ Fortior.

Syn.—RUBINI'S SOLUTION OF CAMPHOR.

Dose for Diarrhœa.—2 to 5 drops on sugar every 5, 10, or 15 minutes, according to the severity of the symptoms.

Flowers of Camphor	1 ounce.
Absolute Alcohol (by weight)	1 ounce.

Dissolve. Produces slightly over 2 fluid ounces, and contains nearly 1 grain in 2 minims.

CAMPHORA MONOBROMATA.

Monobromated Camphor.

Syn.—MONOBROMIDE OF CAMPHOR.

Dose.—2 to 10 grains in pills, with ⅓ of its weight of curd soap and proof spirit *q.s.*

A substitution compound in which one atom of hydrogen in camphor is replaced by bromine. In colourless prisms, soluble in ether, alcohol, and fixed oils, insoluble in water. It has a slight odour of camphor and a turpentine-like taste. It is used as a hypnotic; larg doses produce clonic convulsions and muscular trembling.

Perles are prepared containing about 2 grain in each. The following is also recommended, but it i strongly alcoholic and very nauseous :—

Elixir Camphoræ Monobromatæ.

Monobromated Camphor ...	20 grains.
Spirit of Cinnamon (1 in 50)	15 drachms.

Dissolve and add

Red Elixir...	20 drachms.
Syrup *q.s.* to	5 ounces.

Dose.—½ an ounce (contains 2 grains).

References.

Experiments on animals. It lowers circulation, respiration, and temperature.—Pr. xiii.113.

Not suitable for asylum practice, on account of its comparative insolubility in any but irritating media.—Pr. xiii.324.

Physiological experiments on rabbits and therapeutic uses. Has risks of gastric irritation given by mouth, and cutaneous inflammation used hypodermically.—Pr. xiv.262.

Results of its use in Paris favourable as a hypnotic in nervous diseases.—L. ii.75,215.

In delirium tremens 7-grain doses often repeated is recommended, also in insomnia, chorea, and hysteria.—B.F.M.Ch.R. lviii.459.

In whooping-cough of children, 5-grain doses serviceable, and useful in asthma.—B.

Used in epilepsy, without good results.—L. i./80,553; B.M.J. i./80,548.

Lowers temperature and produces sleep, of use in delirium tremens, convulsions of teething, and hysterical wakefulness.—L. ii./76,698.

CAMPHORA SALICYLATA.

Salicylated Camphor.

Syn.—Salicylate of Camphor.

Dose.—1 to 5 grains, in a pill, with a sixth of its weight of suet or lard.

Prepared by heating together carefully 84 parts of camphor and 65 parts of salicylic acid, until a liquid homogeneous solution is formed, which becomes a crystalline mass on cooling. This again becomes unctuous when pounded, and liquefies when rubbed on the skin. It may be obtained in definite crystals from a benzol solution. It is slightly soluble in water and glycerine, and about 1 in 20 of fats and oils, and is decomposed by hot alkaline solutions. By boiling with water it hydrates into an oily liquid. Applied as an ointment, it was found useful in lupus and rodent ulcers.—P.J. 1881,438, from Annali di Chimica, lxxiii.193.

May prove serviceable in some forms of diarrhœa and to form antiseptic dressings.

Salicylated Camphor Wool. Cotton wool impregnated with 8 per cent. of salicylated camphor, for antiseptic wound dressing.

CANNABIN TANNAS.

Cannabin Tannate.

Dose.—2 to 10 grains, increased to 20, 4 grains being an average dose, taken an hour before bedtime, in a pill with glycerine of tragacanth or in solution of sal volatile and water.

A yellowish brown powder, prepared from *Cannabis Indica*. Tastes like tannin, has a not unpleasant smell, is insoluble in water and ether, slightly soluble in alcohol, and dissolves easily in water made slightly alkaline. It is stated to be free from the two volatile oils contained in *Cannabis Indica*, which are rapidly-acting irritating poisons. It does not produce intoxication, and is said to be a useful hypnotic, that, unlike opium and morphia, it rarely or never deranges the digestive and secretory organs, bowels, &c., and is specially valuable i nervous sleeplessness and in acute mania; 8-grai doses produce calm and quiet sleep.

In insomnia good effects were produced in 37 out 63 cases, moderately good in 15. The patien awoke with no toxic after-effects.—Pr. xxix.377; M.P. ii./82,268; M.R. 1882,453.

Cannabis is useful for chordee and asthma, and an aphrodisiac.

It is *the* remedy for menorrhagia.—B.M.J. i. 1002.

CANTHARIS.

Cantharides (*Off.*).

Syn.—Lytta; Spanish or Blistering Fly.

Dose.—$\frac{1}{16}$ to $\frac{1}{2}$ a grain in a pill. Better given tincture.

Of this, the dried insect—*Cantharis vesicatoria*—th are the following preparations official:—Acetum, 1

10; emplastrum, 1 in 3; tincture, 1 in 80; unguentum, 1 in 7; charta epispastica; liquor epispasticus, 1 in 2¼, (a faulty preparation, *see* p. 74); and emplastrum calefaciens, 1 in 25. The medicinal properties of cantharides are due to a neutral crystalline principle

Cantharidin, in flat glistening rectangular prisms, which melt at 200° C., and volatilize in very irritating white fumes. It is soluble 1 in 84 of chloroform, about 1 in 100 of acetic ether. Soluble also in ether, benzol, glacial acetic acid, fats and oils, 1 in 3,300 of alcohol, insoluble in water. Solutions of Cantharidin, as well as other preparations of cantharides, are employed for stimulating the growth of the hair, in alopecia, and preventing its falling off, as in the following preparation:—

Linimentum Crinale (Squire).

Cantharidin	1 grain.
Acetic ether	2 drachms.

Dissolve with a gentle heat, and add

Rectified Spirit	3 ounces.
Castor Oil...	1 ounce.
Oil of Lavender	15 minims.

"It produced successful vesication of every portion of the scalp to which it was applied."—L. ii./79,713. It is, therefore, too strong to be used freely. It is better to dilute it with an equal quantity of spirit, and the head should be washed after applying it a few times, to prevent the cantharidin accumulating.

References to Cantharidin.

Effects of poisoning by, on kidney and bladder.—L i./80,261; Pr. xxv.53.

Collodium Epispasticum.

Blistering Pigment (see p. 74)	40 ounces.
Pyroxylin	1 ounce.

Dissolve. It evaporates quickly, and its action is confined to the part on which it is painted. It is specially useful to apply to the temple or behind the ear, or other parts of the body where the Pigment would not locate itself.

Liquor Epispasticus (*Off. modified*).

Cantharides, in powder ...	8 ounces.
Glacial Acetic Acid	2 ounces.
Ether	*q.s.*

Mix the acid with 15 ounces of ether, and, having packed the cantharides in a percolator, moisten it with 7 ounces of the mixture, let it stand 24 hours, add the remainder of the liquid and percolate slowly till it ceases to drop, then add more ether (about 12 ounces), and continue the percolation, till one pint of liquid is obtained. Glacial acetic acid is used in about an equivalent quantity for the ordinary acetic acid ordered in the Pharmacopœia, with the latter the ether does not mix well. A more certain blistering application is the following :—

Pigmentum Epispasticum, Blistering Pigment.

Cantharides in powder ...	8 ounces.
Acetic Ether	8 ounces.

Pack the cantharides in a percolator and moisten with the ether. After 24 hours, add more acetic ether, and continue the percolation slowly, till one pint of percolate is obtained. Acetic ether exhausts cantharides most effectually.

In addition to the official Emplastrum Cantharidis a plaster is made in rubber combination, which is convenient for surgeons' use, as it keeps well and merely requires the surface oiling before applying; it contains a little camphor, which is said to prevent strangury.

CAPSICI FRUCTUS.

Capsicum Fruit.

Dose in powder.—$\frac{1}{2}$ to one grain, in a pill.

From this, the well-known fruit of *Capsicum fastigiatum*, a crystalline principle, Capsaicin, possessing great power, has been obtained by Dr. Thresh.—P.J. 1877,187. It caused in $\frac{1}{25}$ grain doses violent griping pain with purgative effect. It is not in commerce.

Capsicin.

An impure acrid oleo-resin, obtained from capsicum fruit, is sometimes in request.

Dose.—$\frac{1}{8}$ to $\frac{1}{4}$ grain in a pill.

Emplastrum Capsici.

Capsicum plasters in rubber combination are made in sheets 7 in. by 5 in., and yard rolls 7 in. wide.

Tinctura Capsici (*Off.*).

1 in 27 nearly of rectified spirit.

Dose.—3 to 20 minims.

Given internally it increases the flow of saliva and gastric juice. It also increases the peristalsis of the intestine, relieves atonic dyspepsia, and is useful in dipsomania—it allays the craving for alcohol. The official tincture is too weak for external use as a rubefacient.

Concentrated Tincture of Capsicum.

1 in 3 of rectified spirit, was employed by Turnbull externally. This is too irritating generally. The writer has found the following approved of:—

Linimentum Capsici.

Capsicum Fruit in coarse powder			1¼ ounce.
Rectified Spirit ..	...	...	*q.s.*
Percolate to obtain	...	...	8¾ ounces.
Add Oleic Acid ...	...	...	9½ drachms.
Oil of Lavender	...	...	½ drachm.

Painted on the skin, or applied sprinkled on piline or lint covered with American oiled cloth, in an hour it produces a red glow; its action may be arrested by smearing the part with vaseline. Useful in chest affections, rheumatism, sciatica, &c.

CARBONIS TETRACHLORIDUM.

Carbon Tetrachloride.

A heavy, volatile, and mobile chloroform-like liquid, has a pleasant pungent, quince-like odour if pure. Sp. Gr., 1·56. The vapour inhaled relieves hay-fever. Employed locally, sprinkled on piline or lint covered with American oiled cloth, it quickly relieves neuralgic pains. Has been used as, but is not a successful anæsthetic.

Anæsthesia rapidly produced by it, effects soon pass off; relieves pain and causes sleep.—L. i./67,574.

Chemical properties, physiological experiments, and uses for inhalation.—L. i./67,660.

Eighteen cases of its inhalation to relieve pain, and for operations and midwifery.—L. i./67,693,762.

Hay-fever, dysmenorrhœa and tic-douloureux relieved by it.—L. i./67,791.

CARMINUM.

Carmine.

A brilliant red colouring matter prepared from the cochineal insect—*Coccus Cacti*. It is insoluble in water, but entirely soluble in aqueous ammonia. It is not employed medicinally, but is much used for staining histological specimens.—See Appendix.

Liquor Carmini.

Carmine ... ... 40 grains.
Distilled Water *q.s.* to moisten.
Strong Solution of Ammonia 40 minims.
Dissolve, and add
Distilled Water to ... ... 1 ounce.

Used to colour various preparations for the toilet, &c.

Cascara Sagrada.—See p. 236.

CAULOPHYLLIN.

Dose.—1 to 4 grains in a pill, with glycerine of tragacanth.

A brown resinoid powder obtained from the root of *Caulophyllum thalictroides*—blue cohosh, pappoose, or squaw-root. It possesses diuretic, diaphoretic, and anthelmintic properties, and is used as an emmenagogue, parturient, and antispasmodic. It appears to exert a direct influence on the uterus.

Chinoidin, U.S.—See Quinoidia, p. 234.

CHINOLINUM.

Chinoline.

Dose.—3 to 10 minims.

A transparent, colourless, strongly-refracting, mobile, oily liquid, with a peculiar odour, soluble in alcohol, but insoluble in water. May be obtained as a derivative of cinchonine and quinine, but recently prepared synthetically by heating, with certain precautions, mixture of nitro-benzol 24 parts, aniline 38, glyceri 120, and strong sulphuric acid 100. The chinoline separated by adding caustic soda in excess and distilli in a current of steam.—P.J. 1882,245.

Chinolini Tartras.

Dose.—5 to 15 grains in chloroform water, with syrup of orange, or in wafer paper.

This salt is most recommended for use. It is, when pure, in odourless, glistening, white acicular crystals, nauseous in taste, and soluble about 1 in 40 of water.

Salicylate of Chinoline

Is also sold. It is less soluble than the above.

The mineral acid salts of chinoline, being mostly deliquescent, do not crystallize well.

Tartrate of chinoline is a powerful germicide and antiseptic. A one per cent. solution completely destroys the coagulability of blood, and weaker solutions render sterile, propagating fluids. Therapeutically, it is a powerful antipyretic in enteric and intermittent fevers, useful in periodic neuralgia, and as a local antiseptic.—B.M.J. ii./81,408; P.J. 1881,279,317,532; P.J. 1882, 624,661; L. i./82,324.

Used in diphtheria, as a pigment to paint the fauces. 5 per cent. of pure chinoline in solution of equal parts spirit and water, and more dilute as a gargle, checks the onset of the dangercus symptoms and in many cases membrane is cast off within 24 hours.—Pr. xxix.447.

Kairine.

Dose.—5 to 8 or 15 grains in pill with glycerine of tragacanth or wafer paper.

The hydrochlorate of oxychinoline-ethyl is used as a febrifuge under this name. It is in minute white granular crystals, freely soluble in water, less so in alcohol, insoluble in ether; the aqueous solution is precipitated by ammonia; the taste is saline, bitter, and persistently nauseous. At London Fever Hospital no patient could be induced to take a second dose in solution.

Used in various fevers, and acute inflammations, it may colour the urine green.—L. ii./83,344,552.

Peritonitis 3 cases, doses of 3 grains every hour reduced pulse and temperature.—B.M.J.i./84,250.

Clinical note on; is a very powerful, if not the most powerful antipyretic.—B.M.J.i./84,711.

CHLORAL HYDRAS.

Hydrate of Chloral (*Off.*).

Dose.—5 to 30 grains, in aqueous solution, or in chloroform water well diluted.

This hypnotic, produced by the action of chlorine on absolute alcohol and subsequent purification, is now well known. Its manufacture is a step short of the complete formation of chloroform. When first obtained as pure chloral it is liquid, by the addition of water to form hydrate it crystallizes. The pure detached crystals are preferred. They are soluble 3 in 1 of water—1 grain may be held in solution in one minim of aqueous solution. Freely soluble also in rectified spirit and ether, and in four volumes of chloroform, likewise soluble in oils and fats. The aqueous solution is decomposed by alkalies into chloroform, and formic acid, which combines with the alkali, should thus yield 72·2 per cent. (not less than 70 per cent. B.P.) of chloroform. Hydrate of Chloral heated first liquefies, then boils and becomes volatilized without residue. It should have, although pungent, no odour of chlorine; its aqueous solution is neutral, or nearly so. Its acrid taste is best disguised by free dilution, with addition of syrup of tolu and chloroform water; 5 grains may be made into a pill with $\frac{1}{2}$ grain Canada balsam, or with a little syrup and tragacanth. As a hypnotic, it is often combined with opiates or morphia, or bromides. Its use is contra-indicated in heart affections, Bright's disease, and when the vital force is very weak. Poisonous doses are best treated after emetics, &c., with hypodermic injection of sulphate of strychnine and inhalations of nitrite of amyl. $\frac{1}{20}$ grain of picrotoxin is said to be enough antidote for 30 grains of chloral.—B.M.J. i./75,506; L. ii./238.

It is useful as an antidote to poisoning by strychnia, and as a remedy for tetanus. A solution of chloral possesses powerful antiseptic properties.

Preparations.

Chloral cum Camphorâ (Pigmentum Chloral et Camphoræ, T.H.).

Flowers of Camphor,
Hydrate of Chloral, of each 1 ounce.

Rub together in a warm mortar until completely liquid and filter. It remains permanently liquid at ordinary temperatures, and forms a valuable application painted on painful parts in neuralgia and rheumatism. It mixes freely in alcohol, ether, oils, and fats, but not with water or glycerine: the camphor is precipitated on its addition to these. The compound (Chloral and Camphor) dissolves the alkaloids atropia, morphia, and veratria to the extent of 1 in 30 or more, but their salts are less soluble in it. Liquefactions of a similar kind take place on mixing and gently heating respectively

Menthol 1, Chloral Hydrate 1.
Thymol 1, Chloral Hydrate 1.

These may prove useful therapeutic agents.

Suppository of Chloral.

Hydrate of Chloral...	...	5 grains.
Oil of Theobroma ...	...	10 grains.

Pound together and press into the mould. Heat must not be applied, else the mixture will not set firm. It is useful in infantile convulsions, where nothing can be administered by the mouth. It should be forcibly retained for a few minutes with the finger, if necessary.

Syrupus Chloral.

Hydrate of Chloral...	...	80 grains.
Distilled water ...	...	½ ounce.

Dissolve and add

Syrup *q.s.* to ...	...	1 ounce.

Dose.—½ to 2 drachms.

CHLOROFORMUM.

Chloroform (*Off.*).

Syn.—TERCHLORIDE OF FORMYL.

Dose.—1 to 10 minims, suspended in equal parts of mucilage and water, or in a perle. Small doses may be given as chloroform water or spirit of chloroform.

This well-known, colourless, mobile, volatile liquid is prepared by distilling a mixture of chlorinated lime, slaked lime, alcohol, and water, treating the distillate with sulphuric acid and redistilling. It is soluble in all proportions in absolute alcohol, pure ether, fixed and volatile oils, and 1 in 200 of water. It does not mix with glycerine. It is a solvent for mastic and most resins, many alkaloids, iodine, bromine, and of phosphorus and sulphur sparingly. It also dissolves gutta-percha and india-rubber. It acts on india-rubber even when vulcanized.

Commercial Varieties.

Chloroform from rectified spirit.

Chloroform from methylated spirit (*purified*).

Chloroform from methylated spirit (*commercial*).

If the Chloroform from methylated spirit be carefully purified, it is indistinguishable by chemical or other means from that prepared from pure spirit, and is equally safe and efficient as an anæsthetic, but this is not the case with the commercial variety. Chloroform, according to the Pharmacopœia, has Sp. Gr. 1·49. It is generally sent out by the best manufacturers Sp. Gr. 1·497 to 1·498 (absolute Chloroform having Sp. Gr. 1·5), and contains a uniform and definite trace of alcohol (about ½ per cent.), which prevents its decomposition. It should be carefully excluded from sunlight. It is not coloured by agitation with sulphuric acid, and leaves no residue or unpleasant odour after evaporation,—a good and simple test. Permanganate of potassium solution, rendered alkaline with caustic potash, has been suggested, both as a test and as a purifier of Chloroform. Commercial Chloroform, when shaken with a little of this solution, quickly turns green; but this has been shown to be due principally to the alcohol added as a preservative. Absolute Chloroform does not change the violet colour of the test.—P.J. 1882,711,740,760,769, 784; L. i./82,355; B.M.J. i./82,62,331. A Chloroform prepared from chloral has been recommended as being extra pure, but is not superior to that made direct from alcohol.

Although the most generally-used of anæsthetics, it has of late fallen into disfavour, ether and dichloride of ethidene having somewhat supplanted it. It is agreeable to the patient, rapid in its action, produces complete insensibility, and there is an absence of excitement and movements during the operation, such as is produced by ether; but Chloroform has a decided effect in reducing the blood pressure, while ether has no appreciable effect of this kind, and Chloroform has sometimes an unexpected and apparently capricious effect on the heart's action, the pressure being reduced with great rapidity almost to *nil*, while the pulsations are greatly retarded or even stopped.—B.M.J. ii./80,970.

Antidotes and References.

In syncope from Chloroform inhalation, 3 drops of nitrite of amyl (a capsule is convenient) restores respiration and circulation, with flushed face and return of sensibility when the pulse or breathing becomes defective, with lips blue, &c.—L. i./75,644.

Atropine injected hypodermically is suggested as an antidote to the cardio-inhibitory effects of Chloroform.—B.J. ii./80,620,715,761.

Professor Von Nussbaum and Professor Claude Bernard have shown that mixed narcotism and anæsthesia reduce the quantity of Chloroform necessary to produce anæsthesia; if $\frac{1}{6}$ to $\frac{1}{4}$ grain of morphia be injected hypodermically before the Chloroform is administered, less Chloroform is needed, the insensibility is more profound, and the danger attending its use is lessened. Of importance in hot climates, where the low boiling point of ether prevents its being used.—Pr. xxv.401; L. ii./82,1031.

Sudden application of large cloth dipped in boiling water to cardiac region in threatened death through syncope from chloroform anæsthesia, was successful in restoring.—L. i./81,1015.

Vegetable and animal infusions and decoctions can be preserved indefinitely by the addition of 1 minim of Chloroform to the ounce of liquid, if vessels containing it be well closed. Better to mix the Chloroform with double its volume of rectified spirit before adding it to the fluid to be preserved.—L. ii./81,694; Pharm. Jour. 1874,441.

Resuscitation from Chloroform syncope by inversion of the body, certainly saved patient.—B.M.J. i./81,559.

Statistics of and correspondence on the recent deaths from.—B.M.J. i./82,247,287.

Is a strong poison to the ventricle of the frog's heart. Solution of ammonia antagonizes its paralyzing action.—Pr. xxvi.437.

In 1882 statistics with particulars of 23 deaths from Chloroform, 4 from ether, and 1 from Chloroform and ether.—B.M.J. i/83,353.

Anæsthetic Preparations of Chloroform.

Chloroform combined with alcohol or Eau-de-Cologne, as well as Chloroform and ether mixed in various proportions, have been used as anæsthetics. Generally one volume of Chloroform is added to two volumes of ether for this purpose. A mixture also which received the approval of the committee of the Medico-Chirurgical Society is known and prepared as follows:—

A.C.E.

Alcohol, Sp. Gr. 0·838	...	1 volume.
Chloroform, Sp. Gr. 1·497	...	2 „
Ether, Sp. Gr. 0·735	...	3 „

The author has been in the habit of preparing it from the more definite ingredients—viz.:—

Absolute Alcohol, Sp. Gr. 0·795	1 volume.
Chloroform, Sp. Gr. ...1·498	2 „
Pure Ether, Sp. Gr. ...0·720	3 „

The mixture has Sp. Gr. 1·01.

The three ingredients are intended to be mixed in such proportions that, when the quantities of each taken separately are exposed to the air in watch glasses, they shall completely evaporate in the same time. It is held they will, from this mixture, evaporate uniformly.

A.C.E. is as effective as pure Chloroform, and a safer agent when deep and prolonged anæsthesia is to be produced, while at the same time it is sufficiently rapid in its operation to be convenient for general use, although it takes a longer time than Chloroform (10 to 15 minutes) to procure anæsthesia.—Medico-Chirurgical Transactions, xlvii.341,343.

This mixture is of great service in midwifery, where complete anæsthesia is not required.

Safer than Chloroform and quicker than ether.—L. i./79,788.

Recommended for use as safe.—L. i/82,328.

In Vienna, the author was informed, a modification of this consisting of Alcohol 3, Ether 3, and Chloroform 10, all by weight, is always used at the General Hospital.

Chloramyl.

Chloroform ...	...	...	1 pound.
Nitrite of Amyl	...	...	2 drachms.

Is not much in use. It is said to possess all the advantages of Chloroform without its dangers. Both the heart's action and respiration are kept up thoroughly throughout the anæsthesia, and this is quickly produced.—B.M.J. i./79,640.

General Preparations of Chloroform.

Internally Chloroform is an antispasmodic and sedative. On account of its agreeable taste it is often added to nauseous medicines, in the form of Spirit of Chloroform, to disguise their taste. Chloroform also acts as an antiseptic, and checks the development of fungoid growths in vegetable infusions. Externally it produces a local anæsthesia, and is added to liniments to aid their absorption and to allay pain in neuralgia.

Aqua Chloroformi (*Off.*).

Chloroform	1 volume.
Distilled Water	200 volumes.

Shake till dissolved.

Dose.—½ to 2 ounces.

Chloroformum Camphoratum.

Camphor	2 ounces.
Chloroform	1 ounce.

Useful for toothache, applied on cotton wool.

Liquor Chloromorphiæ, Chloromorphia Solution.

Chloroform	2 ounces.
Rectified Spirit	2 ounces.
Treacle	4 ounces.
Liquid Extract of Liquorice	1½ ounce.
Hydrochlorate of Morphia .	40 grains.
Sulphate of Atropine ...	1 grain.
Oil of Peppermint ...	8 minims.
Diluted Hydrocyanic Acid...	160 minims.
Tragacanth in powder ...	20 grains.
Distilled Water *q.s.* to ...	10 ounces.

Rub the morphia, atropia, and tragacanth with the liquid extract of liquorice and transfer to a bottle. To the spirit add the Chloroform and oil of peppermint. Mix this gradually with the morphia solution, then add the remaining ingredients and shake well.

Dose.—5 to 20 minims. 30 minims will contain ¼ grain of hydrochlorate of morphia $\frac{1}{160}$ grain of sulphate of atropine, and 1 minim of diluted hydrocyanic acid. Is useful as a sedative, and resembles the secret remedy, Chlorodyne.

Linimentum Chloroformi (*Off.*).

Chloroform, 2 ounces. Liniment of Camphor, 2 ounces.

Perles of Chloroform contain about 3 minims in each.

Dose.—1 or 2.

Spiritus Chloroformi (*Off.*).

Chloroform, 1 ounce. Rectified Spirit, 19 ounces.

Dose.—5 to 60 minims.

Tinctura Chloroformi Composita (*Off.*).

Chloroform	2 ounces.
Rectified Spirit	8 ounces.
Compound Tincture of Cardamoms...	10 ounces.

Dose.—5 to 60 minims.

CIMICIFUGA.

Black Snakeroot.

The rhizome and rootlets of *Cimicifuga racemosa* (*Actæa racemosa*, Linn.), black snakeroot or black cohosh. Indigenous in the United States and in Canada.

Preparations.

Cimicifugin.

The powdered resinoid substance of a yellowish brown colour obtained from black snakeroot.

Dose.—1 to 6 grains in pill with glycerine of tragacanth, as a nervine tonic and antispasmodic, given for rheumatism, chorea, amenorrhœa, and to excite contraction of the uterus.

Tinctura Actææ.—G. and R.

1 in 5 of proof spirit.

Dose.—15 to 60 minims or 5 minims every hour.

Very useful in chronic rheumatism where one part of tendon, muscle, or articulation is exquisitely painful, or where the disease is traceable to previous uterine affection; also in lumbago, sciatica, pleurodynia, and headache from fatigue.—R.

In chronic rheumatism and obscure nerve-pains, also in lumbago very valuable in dose of 30 minims twice or three times a day.—L. ii./62,238.

CINCHONA.

Cinchona (*Off.*).

Dose, in powder, of any variety, according to the Pharmacopœia.—10 to 60 grains.

There are officially stated to be imported from South America:—Yellow Cinchona bark, obtained from *Cinchona Calisaya;* pale Cinchona bark (crown or Loxa bark) from *Cinchona Condaminea, vars. chahuarguera* (*Bonplandiana*, Hooker) and *crispa* (these are all now included under *Cinchona officinalis*); and red Cinchona bark, from *Cinchona succirubra. Cinchona lancifolia,* Mutis, is also mentioned as a source of quinine.

The sources of the principal "barks" of commerce may be tabulated as follows:—

I.	C. officinalis, *var.* *α*, Condaminea „ „ *β*, Bonplandiana „ „ *γ*, crispa		yielding crown bark.
II.	C. succirubra (Pavon), yielding red bark.		
III.	C. nitida C. micrantha C. Peruviana	„	grey bark.
IV.	C. Calisaya	„	yellow bark.
V.	C. lancifolia C. cordifolia	„	Columbian bark.
VI.	C. Pitayensis	„	Pitayo bark.
VII.	Remijia Purdieana „ pedunculata	„	Cuprea bark.

Of late years the principal importations of Cinchona barks have been from New Grenada (United States of Columbia), and Ecuador. With the exception of the Cuprea bark they are now principally exported from the Pacific ports.

The following are the principal varieties:—

Soft Columbian, produced by *C. lancifolia, var. oblonga* and sometimes mixed with the valueless *C. lucumæfolia*—a good quinine-yielding bark. Is very largely imported.

Soft Carthagena, produced by *C. lanceolata* and probably other species, comes principally from Guayaquil, is rich in quinine and cinchonidine.

Hard Carthagena, or **Hard New Grenada,** principally produced by *C. cordifolia*, *C. rosulenta*, &c. These are barks rich in cinchonidine, with some quinine.

New Grenada, produced by varieties of *C. lancifolia*, and probably *C. Palton*. This commercial variety is the most valuable of Columbian barks, being rich in quinine.

Pitayo, produced by *C. Pitayensis*, comes from the district of Popayan, in New Grenada; it is the chief source of quinidine, but also contains cinchonine and quinine.

Cuprea, produced by *Remijia Purdieana* and *R. pedunculata*, is a hard Columbian bark, in thickish curved pieces, of a dark reddish coppery colour, often marked externally by large lenticular depressions. It is collected at the base of the mountains of La Paz, in the basin of the Magdalena River—Bucaramanga being the centre of collection and Barranquilla the port from which it is sent to Europe. Other varieties of this bark come from the valleys of the rivers Meta and Guaviare, affluents of the Orinoco.

Very large quantities of Cuprea bark have been received in London during the last three years; some samples of it have yielded as much as 2·5 per cent. of quinine, but others are very inferior; cinchonidine is generally absent from them, and in some a new principle, nearly allied to quinine, has been found, named Homoquinine, or Ultraquinine. An alkaloid named Cinchonamine has been found in some samples by Arnaud only.

Maracaibo, produced by *C. Tucujensis*, is a hard, yellow, very inferior bark.

These Columbian barks, with the exception of Cuprea, being generally free from colouring matter, and not possessing much astringency, are valuable for the manufacture of quinine and other alkaloids; they are rarely bought by the druggists for making pharmaceutical preparations; but they are imported in immense quantities, as shown by the following table.

London imports of "barks" for the last three years :—

	1883.	1882.	1881.
	Serons and bales.	Serons and bales.	Serons and bales.
Calisaya...	2,774	6,310	7,020
Soft Columbian, New Grenadian, and hard Pitayo	49,827*	84,150*	87,200
Carthagena	1,179	5,470	5,720
East Indies and Ceylon	31,330	21,630	15,400

Last year (1883) the imports were less, yet the stocks held here are large, and the price of bark as well as that of quinine has materially fallen.

Lima Huanuco, or **Grey Barks,** from *C. nitida*, *C. micrantha*, and *C. Peruviana*, are not now much imported, and in commerce are found very inferior in quuality.

Latterly, also, the supply of yellow or Calisaya bark—the kind most prized by English pharmacists, from Bolivia and Southern Peru—has fallen off, either on account of the war or it is nearly exhausted.† The flat kind is very scarce, and that which is chiefly sold as such contains little or no quinine. Of the quills the supply is better, and, judging by its price, it maintains its quality. Of the red bark, in bold, thick pieces, as a South American product, very little is now imported. American pale bark in quills still arrives, but it is of inferior quality. Sir J. Hooker has restored the old name of Linnæus to the species yielding this bark; it is now known as *Cinchona officinalis* and *Cinchona Condaminea* is classed as a variety of it.

The reckless destruction of the Cinchona trees in their native habitats, led the British and Dutch Governments, as well as private individuals, to commence the cultivation of them, and for many years now the Indian, Java, Ceylon, and Jamaica plantations have been very productive of Cinchona bark. The species which have been most successfully cultivated are *C. succirubra*, *C. officinalis*, and some varieties of *C. Calisaya*; of the last, *var. Ledgeriana* has proved the most valuable.

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* These totals include Cuprea, the imports of which were, in 1882 about 67,000 packages, against, in 1881, about 60,000 packages.

† Although quite recently energetic steps have been taken to cultivate cinchona-trees in Bolivia, one of its native habitats, which have been very successful both as regards the number of young plants and the quality of bark they yield.

In Java the Cinchona has been cultivated during the last twenty-six years on its mountainous regions; exclusive of the *C. Pahudiana*, which was worthless and a mistake, there were, in 1879, 1,678,670 Cinchona-trees planted out, consisting principally of the species *C. Calisaya* (including *var. Ledgeriana*), *C. officinalis*, and *C. succirubra.*

In the south of India, under the Government, near Ootacamund, in the Nilgiri Hills, as well as by private enterprise, very successful Cinchona plantations have been established. The species which preponderate in the Government plantations are *C. succirubra* and *C. officinalis ; var. Ledgeriana* is also grown in this district, but is principally in private plantations, its bark rarely comes into the London market; a very large area is here under Cinchona cultivation.

In the North-east of India, among the Himalayas, at Rungbi, near Darjeeling, in Sikkim (Bengal Presidency), the plantations are also very successful. The trees number about 3,000,000, principally *C. sucoirubra* and *C. Calisaya.* Here a factory has been started for making the Cinchona febrifuge, a mixture of the crude Cinchona alkaloids. In the Punjab Himalayas attempts have likewise been made to cultivate the Cinchona.

In Ceylon, on the mountainous parts, 7,000,000 have been planted. They consist principally of *C. officinalis* and *C. succirubra.* They produce valuable quinine-yielding barks, and large supplies are imported.

In Jamaica, too, on the Blue Mountains, the Cinchona has been cultivated with success. The species, as in Ceylon, growing best, are *C. officinalis* and *C. succirubra ; C. Calisaya, var. Ledgeriana*, is also being tried here.

The Cinchona is also being cultivated in British Burmah, Mexico, Trinidad, and latterly in Bolivia (p. 87).

From the East Indies and Ceylon 21,630 packages were imported in 1882, but some very small; this was upwards of one-fifth the number from all sources. The bark from cultivated Cinchonas is generally superior to that from natural trees. *C. Calisaya var. Ledgeriana*, when cultivated, has yielded bark which, on analysis, gave 9·9 per cent. of quinine and 11·9 per cent. of total alkaloids, and some of this bark from Java has been sold in the Amsterdam market as high as 17s. per lb. The bark of *C. officinalis* is most improved by cultivation. As imported from South America, of late years it has been very poor, and contains principally the least valuable alkaloid, cinchonine. Cultivated, *C. officinalis* becomes a rich quinine-yielding species; it generally requires an altitude over 4,000 feet, and it comes to maturity in five to seven years. It does not grow well in Sikkim.

The cultivated Cinchona barks, to a great extent, retain the characters of their parent species, but, as some which come into the market are the products of hybrid plants, it is difficult at times to identify them. Being as yet from young trees, they are imported in quills, varying from a quarter to an inch and a half or more in diameter. *C. succirubra,* which grows at a low elevation —between 2,500 and 5,000 feet—yields the Indian red bark. Of this the largest quantity is imported, and it is most variable in character and quality; the dried bark of young trees and branches is thin, and is more wrinkled longitudinally than the other varieties, owing to contraction in drying; this young bark is often comparatively poor in quality. It attains its maximum yield of alkaloids when the trees are eight years old; then the quills are bold, and the warty character of the dark brownish, red-coloured, corky layer becomes marked.

C. officinalis produces the Indian pale bark in quills resembling the original Loxa bark, having a rough, much fissured, silver-grey exterior, often beset with large lichens, and has an inner surface bright or pale yellowish brown in colour.

C. Calisaya, which grows at an elevation between 4,200 and 5,000 feet, yields the Indian quill yellow bark, very like that from South America. The larger quills are often double, and rolled up from both edges. The easily detached outer coat has in many parts peeled off, showing the cinnamon colour of the middle layer.

In the Government plantations a system of "mossing," or covering up the stems of the trees with moss, is pursued, which improves the quality of the bark. Some of the above characters are not so evident on this bark as met with in commerce. Another process consists of removing the bark from the stem in strips, leaving alternate portions undenuded, and covering the denuded parts with moss; a bark renews under the moss which is richer in quinine than the original bark. At the end of six or twelve months the bands of bark left untouched are removed, and a system of alternate removal from one or the other portions of the trunk is carried on for years. The renewed bark commands a high price in the market. This process has been principally applied to the red and pale barks. The warty appearance of the outer surface of the red bark is still prominent on the renewed bark, and it is darker in colour than the renewed pale bark; the latter has more transverse cracks or fissures. The renewed barks are in flatter pieces and thinner than the natural, and are often twisted and recurved.

In Ceylon the bark is mostly shaved off without touching the cambium, and the denuded surface is covered with "mana" grass (*Andropogon Martini*), under which a bark, richer in quinine, renews rapidly.

The species *C. succirubra* has proved to be the hardiest and most easily propagated, and, although on analysis the yield of cinchonidine and quinidine generally preponderates over that of quinine, yet the total yield—often 5 to 10 per cent.—of alkaloids from the bark of this Cinchona is very large. It is, therefore, a valuable bark for pharmaceutical purposes, and it has been recommended to take the place of the yellow bark in the preparations into which this enters in the Pharmacopœia, when a revision is made.—P.J. 1881,368. The liquid extract of this bark has been much lauded in America for giving drunkards a distaste for alcohol.—B.M.J. 1/80,271,681.

Preparations.

Of **Yellow Bark** (*Off.*).—*Decoctum*, *Extractum Liquidum*, *Infusum*, *Tinctura*, and Sulphate of Quinia. Next to quinine, if carefully prepared from good bark, the tincture best exhausts the bark, and gives most value, and the liquid extract least exhausts it.—P.J. 1883,737.

Elixir Cinchonæ.—See p. 110.

Of **Pale Bark** (*Off.*).—*Mistura Ferri Aromatica* and Compound Tincture.

Vin de Quinquina au Malaga.

Calisaya bark 3 parts, in 100 of Malaga wine.

Dose.—1 to 4 drachms, is readily taken by children.

Cinchonia and Sulphate.—See p. 91.

Cinchonidiæ Sulphas.—See p. 91.

Quinetum and Sulphate.—See Quinetum, p. 227.

Quinia and Salts.—See Quinia, p. 228.

Quinidiæ Sulphas.—See p. 234.

CINCHONIA.

Cinchonine.

Dose.—1 to 10 grains.

An amorphous white powder, as met with in commerce, obtained from Cinchona barks, isomeric with cinchonidine, but solutions of its salts are dextrogyrate. Being insoluble in cold water, and requiring 2,500 of boiling water to dissolve it, it is almost tasteless, and is recommended in the following form as a tasteless febrifuge for children :—

Pulvis Cinchoniæ Compositus.

Cinchonine	12 parts.
Bicarbonate of Soda ...	1 part.
Sugar of Milk	60 parts.

Rub to a fine powder.

Dose.—3 to 12 grains, according to age.

Cinchoniæ Hydrochloras.

Dose.—1½ to 10 grains, or more.

In white acicular crystals, very like sulphate of quinine, very soluble in water and alcohol.

Cinchoniæ Sulphas.

Dose.—1½ to 10 grains, or more.

In hard, colourless, short rhombic prisms, with a vitreous lustre. Soluble 1 in 54 of cold water, 1 in 12 bsolute alcohol. Cinchonine salts are much the cheapt of the alkaloidal salts of Cinchona. Their nauseous, itter taste is objectionable. They are given in doses ne-third larger than quinine and for the same purposes; s prophylactics some have thought them superior to quinine. The hydrochlorate is the salt most convenient r use. May be dispensed in aqueous solution, or in pills, 5 parts with one of glycerine of tragacanth.

CINCHONIDIÆ SULPHAS.

Cinchonidine Sulphate.

Syn.—Formerly termed QUINIDINE SULHATE, or CHINIDIN SULPHATE, by German Chemists.

Dose.—1 to 10 grains.

In silky white needles, generally smaller than sulphate of quinine, obtained from some cinchona barks. Although isomeric with cinchonine, its solution is lævogyrate to polarized light, like that of quinine, but it does not, like the latter and true quinidine, produce the emerald green colour with chlorine water and ammonia. The sulphate is soluble 1 in 50 of alcohol, 1 in 100 of water, rendered more soluble in water by addition of acid—a minim or more of diluted sulphuric acid to a grain—may be dispensed thus, or 5 parts with 1 of glycerine of tragacanth in pills. Taste, bitter.

Much less costly than quinine, and can be used with effect in doses of 1 to 5 grains as an antipyretic.—Pr. xvii.53.

In intermittent fever as much as 62 grains per day produced marked slowing of the pulse, without any convulsive action or symptom of intoxication, which it has been said to cause.—Pr. xxiv.375.

In intermittent fever 5 or 6 grains 4 or 5 times a day is most effective.—L. ii./81,1065.

Salicylate of Cinchonidine is useful as a tonic and antiperiodic in neuralgia, rheumatism, sciatica, &c., 5 grains every 2 hours in pills or wafer paper.—B.M.J. i./81,428.

COCA.

Syn.—Cuca.

Dose.—½ to 2 drachms.

The leaves of *Erythroxylon Coca*, a shrub growing on the mountains of Bolivia and Peru. They are about two inches long, oval oblong, entire on the margin, usually blunt and emarginate, with a small apiculus in the notch at the apex; rather thin, smooth, with a prominent midrib, and on each side a curved line running from the base to the apex. They have a slight odour of tea, and a somewhat bitter, aromatic taste. They are said to be most active when freshly dried, and are much used by the native Indians and others, miners and travellers, to appease hunger and thirst. By them they are eaten or chewed with wood-ashes or lime, from 2 to 8 drachms or more daily. The leaves contain a yellowish white, crystalline, bitter alkaloid. **Cocaina, Cocaine.**—*Dose*, ⅛ to 1 grain.

Cocainæ Hydrochloras is more soluble.—*Dose:* ¼ to 1 grain.

A **Wine of Coca**, containing about 1 in 30—*dose*, a wineglassful—and a **Liquid Extract**, and an **Elixir**, about 1 in 6—*dose*, 1 to 4 drachms—are prepared. An **Extract** of the green leaves also is imported—*dose*, 5 to 15 grains. **Pastils** are also prepared, containing 2½ grains of this extract in each—*dose*, 1 every 2 or 3 hours as a restorative. **Extractum Erythroxyli Fluidum**, U.S.—*Dose.*—½ to 2 drachms; 1=1 part of leaves, is about 6 times stronger than the above-mentioned Liquid Extract, which is a French nostrum.

The leaves are chewed to appease hunger and support strength, in the absence of food, and used generally for the stimulant and narcotic effects of tobacco and alcohol.—Pr. xvi.467.

Coca-leaves as an inhalation or smoked in a pipe, have a decided effect on bronchial spasm.—L. i./76,520.

Is of use to steady the nerves of excitable persons—to a sportsman in shooting, for example; to give endurance, is used by travellers in Bolivia and Peru, and to counteract the effect of rarefied air on mountains.—L. ii.76,449.

Historical and botanical account of the plant and its uses; the result of a series of experiments on its use, was most unsatisfactory, although the drug was given in every variety of ways, under all circumstances and at all hours of the day.—L. i./76,631,664.

Two ascents of Ben Vorlich, under the influence of, respectively, 60 and 90 grains, done with ease by Sir Robert Christison. By the use of Coca hunger and thirst are suspended, but eventually appetite and digestion are unaffected; the mental faculties are not affected after great bodily fatigue, except by freeing them from dulness and drowsiness.—B.M.J. i./76,527; P.J. 1876,883.

Twelve athletes, during a game, chewed, without lime or ashes, from 60 to 90 grains; at first in some, dryness was felt, and relieved by washing the mouth; then followed a feeling of invigoration, so that fatigue was wholly or in great part resisted; the pulse increased in frequency, and perspiration augmented. Save exhilaration of spirits, no mental effects were noticed or disagreeable effects realised.—P.J. 1877,221.

A party climbing Mont Blanc, each chewing 80 grains of Coca during ten hours, were much relieved from thirst by its use. They drank no water, tea, or coffee, and but a limited amount of wine, yet Coca enabled them to make the trip with comparative comfort.—M.T.G. ii./82,165.

It enables a greater amount of fatigue to be borne with less nourishment, and lessens the difficulty of respiration in ascending mountain sides. Tea made from it has much the taste of green tea, and is much more effectual in keeping people awake.—Markham's Peruvian Bark, p. 152.

In France, Bouchardat states it has rendered most valuable therapeutic service, almost equal to cinchona bark. It is a stimulant to the nervous and muscular systems, and ranks with tea and coffee; it prevents the rapid waste of tissue, and enables the consumer to go a long time without food.—B.M.J. i./76,486.

Use in walking feats.—B.M.J. i./76,335,361,387,518, 519,750,752.

Cocaine is a mydriatic; slightly raises the temperature, quickens respiration, and pulse is more frequent; by long use, sleep is longer and more profound. Improves nutrition, useful in insomnia and simple melancholia.—M.R. 1883,86.

CODEIA.

Codeine.

Dose.—¼ to 2 grains.

An alkaloid from opium, generally in large prisms slightly brownish in colour. Soluble 1 in 80 to 100 of water, very soluble in alcohol and in excess of aqueous ammonia, but insoluble in excess of potash solution. It is a methylic ether of morphia,—monomethyl-morphia,—and has been synthetically prepared from it by the action of iodide of methyl and alcoholic caustic soda solution. It has a slightly bitterish taste. In moderate doses is a hypnotic, and in small doses frequently it allays cough in phthisis. In diabetes it lessens the amount of sugar in the urine. For hypodermic injection **Phosphate** of Codeia, which contains 70 per cent. of alkaloid, and is soluble in 4 parts of water, is the most suitable salt.

Pilula Codeiæ Composita.

Codeia	½ grain
(increased to 2 grains if necessary).	
Extract of Nux-vomica ...	½ grain.
Extract of Lettuce ...	3 grains.

Make one pill, to be taken two or three times a day for diabetes.

Syrupus Codeiæ.

Codeia	1 grain.
Diluted Phosphoric Acid	2 minims.
Distilled Water	8 minims.
Dissolve and add	
Syrup to	1 ounce.

Dose.—A teaspoonful for coughs.

Trochisci Codeiæ contain an eighth of a grain in each.

References.

Sleep produced by it is not followed by the heaviness of that from morphia.—L. i./66,250.

Syrup useful in troublesome cough, especially phthisical.—B.M.J. i./79,546; Pr. xxiv.447.

In diabetes, doses of $\frac{1}{4}$ to $\frac{1}{2}$ a grain three times a day at first, the dose being increased gradually until sugar disappeared from the urine, or increasing drowsiness demanded its discontinuance.—B.M.J. ii./81,474.

In diabetes considered to be of greater service than the other constituents of opium, as it does not produce the same narcotic effect as opium and morphia.—Guy's Hosp. Rep. xv.420.

Diabetes mellitus, 3 cases recorded with marked improvement. Codeia should be given at once, and in fairly large doses, until some physiological effect is produced. Even dieting appears to sink in significance by the side of Codeia.—B.M.J. i./82,933.

In bladder troubles, complicated with enlarged prostate, Codeia is a useful sedative when other opiates fail.—B.M.J. i./84,802.

COLCHICIN.

Dose.—$\frac{1}{32}$ grain in a pill.

The active principle of the meadow saffron, *Colchicum autumnale.* An amorphous yellowish powder, does not combine with acids except tannic acid, is soluble in alcohol and chloroform, less so in ether and water. Of use in acute gout, rheumatic gout, asthma, cerebral congestion, and uræmia.

In chronic rheumatism, apply hypodermic injections of doses of $\frac{1}{32}$ grain in 15 minims of water.—M.T.G. 1/77,463.

In neuralgic joint affections, and rheumatic ischiagra, $\frac{1}{32}$ gr. hypodermically injected succeeded.—Pr. xxiii.458.

Toxicological action—it affects the gastro-intestinal mucous membrane, causing severe pains in the bowels of the nature of colic, vomiting, diarrhœa, intense thir and violent burning in the throat, œsophagus, and stomach.—B.M.J. ii./79,1,024.

Preparation of, and chemical properties.—P.J. 1881, 498.

COLLODIUM.

Collodion (*Off.*).

Syn.—CONTRACTILE COLLODION.

Preparations.

Collodium cum Oleo Crotonis.

Croton oil 1 part mixed with 7 parts, more or less as required, of Flexible Collodion, forms a useful counter-irritant; a thin layer painted on quickly dries, and its action is limited to the spot to which it is applied.

Collodium Epispasticum.—See Cantharis, p. 73.

Collodium Flexile (*Off.*).

Contractile Collodion 1 ounce, Canada balsam 20 grains, castor oil 10 minims; makes a more elastic film than Contractile Collodion.

Collodium Iodi.

30 grains of Iodine, more or less if required, to the ounce of Flexible Collodion, forms a coating which, on account of the iodine not being so readily volatilized as from an application of the liniment, sustains the action of the iodine and the film protects the part.

Collodium cum Iodoformo.—See Iodoform, p. 154.

Collodium Salicylicum.

Salicylic Acid	60 grains.
Extract of Indian Hemp ...	8 grains.
Flexible Collodion	1 ounce.

Dissolve. Applied daily, this forms a rapid and painless solvent for corns and warts.—L.ii./83,951; B.M.J. ii./83,1071.

The following more active preparation is similarly used; both preparations have proved useful in epithelioma.

Collodium Salicylicum cum Zinci Chlorido.

Salicylic Acid	60 grains.
Chloride of Zinc	30 grains.
Collodion	1 ounce.

Dissolve, forms a clear solution. 1 of Chloride of Zinc forms an imperfect solution in 6 of Collodion (with some chemical change probably).

Collodium Stypticum.

Syn.—**Styptic Colloid:**

Tannic Acid (soluble) ...	10 parts.
Rectified Spirit	10 fluid parts.
Benzoin	1 part.

Dissolve, strain, and add

Ether, Sp. Gr. 0·720 ...	32 fluid parts.
Gun Cotton	2 parts.

Mix, set aside two or three days, and decant.

Forms a useful application in checking various forms of hæmorrhage when it can be brought in contact with the bleeding surface.

CONIA.

Coniine.

Dose.—¼ grain, increased gradually to 2 grains.

A liquid alkaloidal principle, almost colourless, and having a penetrating empyreumatic odour, obtained from hemlock, *Conium maculatum.* It is slightly soluble in water.

Coniæ Hydrobromas.

Dose.—⅓ grain, increased gradually to 2 grains.

In colourless crystalline prisms, resembling sulphate of magnesia in appearance. Soluble 1 in 8 of water.

Injectio Coniæ Hydrobromatis Hypodermica.

Hydrobromate of Conia ...	1 grain.
Distilled Water	20 minims.

Dose.—1 to 3 minims.

Pessus Coniæ (Hosp. for Women).

Conia	½ minim.
Gelatine Mass	20 grains.

Make one pessary.

Pilula Coniæ Hydrobromatis.

Hydrobromate of Conia ⅓ grain in each.

References.

Conia is most suitable in acute mania without organic brain disease, ½ minim of Conia given hypodermically is equal to one drachm Succus Conii.—Rank. ii./72,119 *ex* West Riding Lunatic Asylum Med. Rep. vol. ii.

Hydrobromate of Conia is useful in neuroses and spasmodic affections of chronic bronchitis.—Pr.xx 202,212.

Physiological action of the colourless Hydrobromate is like that of curare, but it does not act at all on the central nervous system like commercial liquid Conia; the latter contains two alkaloids.—L. ii./80,778.

Large doses, 2 to 4 drachms, of Succus Conii useful in Chorea.—L. i./83,905.

Hydrobromate of Conia acts chiefly as a direct sedative to the respiratory centre; in poisonous doses death is caused by asphyxia. It is employed with advantage in all spasmodic affections, especially those of the respiratory organs; and in neuralgia commence with 1½ grain but not exceed 4½ grains per 24 hours.—Pr. xxviii.136.

CONVALLARIA MAJALIS.

Lily of the Valley.

The flowers, as well as the whole plant of this, form an old remedy for dropsy in Russia. In functional and organic disease of the heart, an infusion of 10 grains in 6 ounces of water, of which half an ounce twice a day for two or three days lessens the irritability and peevishness. The effect will continue for from 5 to 9 days without producing dyspnœa or palpitation. Under this treatment the patient can take bodily exercise without discomfort.—Edin. Med. Jour. xxvii.645; P.J. 1883,1058.

Two glucosides have been obtained from the plant: convallarin, convallamarin, and a principle found in the flowers only.

Convallarin, a pale brownish white powder, soluble in alcohol, but insoluble in water; in dose of 3 or 4 grains, only has a purgative effect.

Convallamarin.

Dose.—½ to 2 grains.

A pale, whitish brown amorphous powder, soluble in water and alcohol; is said to contain the active properties of the drug. It acts principally on the heart. Physiologically its action approaches that of digitalin, helleborin, &c. Death is produced by stoppage of the heart, and nearly always accompanied by intense clonic convulsions.—P.J. 1882,423.

Extractum Convallariæ.

Dose.—2 to 8 grains.

An aqueous extract of flowers and stems, with **one-third** of roots and leaves, is said to be most active.—**P.J.** 1883,143.

Extractum Convallariæ Fluidum.

Dose.—2 to 10 minims; 1 = 1 of flowers.

Tinctura Convallariæ.

Dose.—5 to 30 minims; 1 in 8 of proof spirit.

Convallaria is a powerful diuretic, irregularity of heart's action is lessened, used in mitral and aortic regurgitation, dilatation of the heart, senile hypertrophy, chronic pericarditis, anæmia, and diabetes.—L. ii./82,327.

In all forms of heart failure it is useful, and has none of the nauseating effects of digitalis. It promotes a stronger ventricular contraction, and does not exhaust the contractility of the heart and arteries.—L. i./83, 185.

Editorial Notes on.—It exerts no deleterious effects, takes the place of digitalis in organic heart disease, relieves promptly without danger of overdose or cumulative action.—B.M.J. i./83,568.

Action of convallaria not identical with that of digitalis; a small dose should be commenced with. L. ii./83,24.

In a case of mitral obstructive disease, Liq. Ext. m.x. 4tis horis, et P. Jalap. Co. 60 grains o.n., improved action of heart, increased the urine, and œdema of legs and ascites disappeared.—Pr. xxxii.265.

COTO CORTEX.

Coto Bark.

Dose, in powder, 1 to 8 grains 4 to 6 times a day.

Coto Bark, imported from Bolivia, has been used for diarrhœa, gout, and rheumatism. It is rich in resinous principles, which give it a pungent taste.

Tinctura Coto.

Coto Bark	1 ounce.
Rectified Spirit	10 ounces.

Macerate 7 days, press and filter to produce 10 ounces.

Dose.—10 minims, with mucilage and syrup to suspend, every 2 hours, in diarrhœa.—P.J. 1875,301.

Cotoin. Obtained from Coto Bark.

Dose.—½ to 2 grains every 2 or 3 hours, diffused in water by means of mucilage or syrup, for stomachic catarrh and phthisical diarrhœa, causes a reduction of the febrile symptoms.

Cotoin is a pale yellow amorphous powder, or in minute curved crystalline prisms, non-volatile, slightly soluble in water, soluble in alcohol, ether, and chloroform, caustic and carbonated alkalies. It has a bitter taste, and the dust is irritating to the nostrils.

For hypodermic injection a solution 1 in 4 of acetic ether is recommended as having a specific action on the bowels in cholera, 15-minim doses to be given every quarter of an hour to every hour.—P.J. 1883,62.

Paracotoin. Obtained from Paracoto Bark, a bark allied to Coto Bark.

Dose.—1½ to 3 grains every 2 or 3 hours in chronic and acute stomachic catarrh and Asiatic cholera.

Paracotoin is in minute laminar crystals, paler than cotoin. Soluble in ether, chloroform, boiling alcohol, and somewhat in boiling water, but from this it separates on cooling. It appears to be a weaker Cotoin.

Elixir of Coto, very beneficial in cases of infantile diarrhœa—6 to 12 drops every 3 hours.—Pr. xxii.61.

In diarrhœa of phthisis, 5 to 8 minims of fluid extract of Coto found useful. Must not be combined with mistura cretæ.—Pr. xxiii.257.

Checks night sweats in incipient phthisis.—L. ii./81, 818; B.M.J. ii./81,727.

No drug equal to Cotoin in the treatment of diarrhœa of all kinds, especially that of phthisis; it checks salivation and night sweats.—M.R. 1883,16.

COUMARINUM.

Coumarin.

Dose—?

A neutral crystalline principle in colourless rectangular plates, may be obtained from Tonka or Tonquin beans, the fruit of *Coumaruma odorata*, is also found in the woodruff *Asperula odorata*, and *Melilotus officinalis*, &c., but it is now manufactured synthetically from Salicylol, or Salicylic Aldehyde. It is almost insoluble in cold water, but readily soluble in hot, dilute acids, and alcohol has an agreeable aromatic odour, a burning taste, sublime unchanged, and the vapour acts very strongly on th brain. 1 part to 50 of iodoform has been employed t disguise the odour of the latter.—See Iodoform, p. 158

CREASOTUM.

Creasote (*Off.*).

Syn.—KREOSOTE.

Dose.—1 to 3 minims.

Obtained from wood tar, soluble in alcohol, ether, glacial acetic acid, fats and oils, insoluble in glycerine, sparingly soluble in water—about 1 in 1,000. Two kinds of genuine Creasote are met with in commerce—Hydrated Creasote, which keeps stable and almost colourless, but makes a cloudy mixture with oil of turpentine, and—Anhydrous Creasote, which, although liable to turn brown, mixes perfectly with oil of turpentine. As Creasote coagulates albumen in solution, it acts locally as a caustic. It is one of the most powerful deodorisers, antiputrescents, and antiseptics. It is used to correct fetor, given to check sickness, added to cod-liver oil for phthisis, and externally in various skin diseases.

Mistura Creasoti (*Off.*).

Dose.—1 to 2 ounces.

Contains 1 minim of Creasote in an ounce. It is not a satisfactory preparation, as the Creasote does not dissolve perfectly.

Pilula Creasoti (Martindale).

Creasote	2 drachms.
Curd Soap, in powder ...	120 grains.

Put the Creasote in a 1-ounce wide mouth stoppered bottle, add the soap, and mix well. Then digest in a water bath till they combine. Each 2 grains of the mass will contain, as nearly as possible, 1 minim of Creasote.—(P.J. 1878,681.)

Dose.—2 to 6 grains.

The writer has found this mass the most convenient for giving Creasote in pills. It combines with other ingredients without decomposition. Calcined magnesia and slaked lime, sometimes recommended as excipients, form compounds with Creasote perfectly insoluble and indigestible. Care should be taken not to mix oxide of silver directly with pure Creasote, else deflagration will occur; but oxide of silver may be mixed with the above mass, although it is not advisable to prescribe the two drugs together in a pill.

Pulvis Creasoti et Amyli.

Creasote	10 minims.
Starch, in powder... ...	1 ounce.

Mix well. It is used as a dusting powder in erysipelas

Unguentum Creasoti (*Off.*).

Creasote 1 drachm, mixed with 1 ounce of simple ointment.

Unguentum Creasoti Forte, B.S.H.

Creasote	6 drachms.
Yellow Wax	180 grains.

Melt, and stir till cold. Used in psoriasis. Caution.—Should not be applied to the belly, face, or flexor surfaces of the limbs.

Vapor Creasoti, T.H.

Creasote...	80 minims.
Light Carbonate of Magnesia	30 grains.
Water to	1 ounce.

A teaspoonful in a pint of water at 140° F. Useful in chronic congestion of the larynx and trachea, and in ozœna, fetor of breath in bronchitis, gangrenous lung, and syphilitic throats.

References.

Case of poisoning by, with recovery, resembles hydrocyanic acid in its poisonous effects, and both are used to arrest vomiting. As a sedative and anodyne, Creasote is given internally to relieve the pain of cancer of the stomach.—Ass. J. 1853,929.

In cancroid skin diseases pills of Creasote recommended.—L. ii./55,626.

Urine curiously discoloured while taking creasote (? Purity of the Creasote. Probably impure carbolic acid).—B. and F.M.Ch.R. ii./57,134.

Lessens cough and expectoration in phthisis. 1 part in 40 of rectified spirits, of this a teaspoonful twice a day; also in 1 or 2 minim doses in solution in cod liver oil or in troches with balsam of tolu.—Pr. xxii.380 ; Pr. xxvi.296.

Used for antiseptic inhalation for phthisis dropped on respirator.—L. ii./77,598.

Creasote 3 parts with carbolic acid one part dropped on the cotton wool of the naso-oral respirator recommended for continuous local medication in phthisis. —L. ii./80,870 ; Pr. xxix.94 ; B.M.J. ii./81,813.

Creasote used to medicate the respirator. It is more sedative in its action if mixed with an equal volume of spirit of chloroform, 5 to 15 or 20 minims dropped on the cotton wool at one time.—B.M.J. ii./82,7.

CROTON-CHLORAL HYDRAS.

Croton-Chloral Hydrate.

Syn.—BUTYL-CHLORAL HYDRATE, (which chemically it is; it does not belong to the Crotonic Acid series).

Dose.—2 to 15 grains or more.

In pearly-white crystalline scales, having a pungent odour resembling that of Chloral Hydrate, and an acrid, nauseous taste. Soluble 1 in 100 of cold water; freely soluble in rectified spirit, and about 1 in 4 of glycerine.

It is, perhaps, the most efficacious remedy in facial neuralgia.—R.

A mixture of Menthol 2 parts, with Croton-Chloral Hydrate 1 part liquefies.—See Menthol, p. 174.

Mistura Croton-Chloral, T.H.

Croton-Chloral Hydrate ...	4 grains.
Glycerine	15 minims.
Water	to 1 ounce.

This dose is very useful as an anodyne in neuralgic affections of the throat, frequently repeated.

Pilula Croton-Chloral.

Croton-Chloral Hydrate ...	3 grains or more.
Glycerine of Tragacanth, or Mucilage of Acacia	*q.s.*

To make one pill.

Dose.—1 every 2 hours, or hourly.

Pilula Croton-Chloral cum Gelsemiâ.

Hydrochlorate of Gelsemia $\frac{1}{200}$ grain, is added to each of the above and, for facial neuralgia, given similarly.

Syrupus Croton-Chloral.

Croton-Chloral Hydrate ...	16 grains.
Syrup	1 ounce.

Dissolve the hydrate in the syrup made hot.

Dose.—One drachm every hour.

References.

Relieves paroxysmal neuralgic pains in the regions supplied by the fifth nerve.—L. ii./72,558.

For toothache of pregnancy and neuralgic toothache, doses of 5 to 15 grains internally; and used also locally. —Pr. xix.382.

It produces slumber without the lowering of the pulse, which chloral itself causes. Dose, 5 to 15 grains.—Br. i./75, 336.

Cured cases of paroxysmal headache in females suffering from mental distress and facial neuralgia; useless in pain from decayed teeth.—B.M.J. i./79,667.

CURARA.

Curare.

Syn.—OURARI, URARI, WOURARA, WOURALI.

Dose.—$\frac{1}{20}$ to $\frac{1}{3}$ grain.

The South American Indian arrow-poison, produced from species of *Strychnos* and other plants. A blackish-brown coloured, dry extract, with a bitter taste; contains some resin, but it should be nearly all soluble in water.

Curarinæ Sulphas, Curarine Sulphate.

A salt of the active principle of Curare, very deliquescent and a most powerful poison. In toxicological research, Curarine, like strychnia, with sulphuric acid and bichromate of potash, is coloured first blue, then violet, and later on cherry-red, but the transition is slower than with strychnia; sulphuric acid alone imparts a red colour to solutions containing Curarine, it has no effect on strychnia. The physiological test for Curarine is more valuable.—B.M.J. ii./79,1025.

Injectio Curaræ Hypodermica.

Curare	1 grain.
Distilled water	12 minims.

Rub the Curare to powder carefully, add the water gradually, filter, and add water over the filter to produce 12 minims.—P.J. 1877,424.

Dose.—1 to 6 minims.

Used to paralyse muscular movements in experiments on biliary secretions of dog, in dose of from 0·02 to 0·06 gramme of Curare.—Pr. xxiii.327.

Note on general uses of.—L. ii./75,503.

Note on preparation of.—L. i./80,788.

Relieves chorea; subcutaneous injection of $\frac{1}{20}$ to $\frac{2}{5}$ grain.—L. ii./78,253; Br. ii./78,75.

In hydrophobia, a case cured by $\frac{1}{3}$ to $\frac{1}{2}$ grain, hypodermically, repeated about every half-hour, as required, to allay the spasms, until these ceased entirely, and paralysis of all voluntary movements became apparent.—M.T.G. ii./77,396.

Its botanical sources and varieties.—P.J. 1880-81,491, 529,589,693,754.

Its use as a palliative in hydrophobia.—L. ii./81,624.

Cases of tetanus treated by hypodermic injections of Curare. To adults, 4 grains may be exhibited at intervals in the 24 hours, without danger to life.—Dub. Jour. Med. Sci., 1882,307.

CYPRIPEDIN.

Dose.—1 to 3 grains, in a pill with glycerine of tragacanth.

The dried extract of the root of *Cypripedium pubescens*, Ladies' Slipper. It has a snuff-brown colour, and is given in nervous affections, hysteria, hypochondriasis, and is said to be useful in epilepsy.

DAMIANA.

The leaves of some species of *Turnera* are imported, and are recommended in the United States as possessing aphrodisiac properties.

Extractum Damianæ Liquidum is prepared, of which two drachms represent a drachm of the leaves.

Dose.—1 to 2 drachms.

References.

It is a nerve tonic of great value in sexual debility; useful also in hemiplegia and paraplegia.—Pr. xxiv.58.

Botanical source and history.—P.J. 1875,423,493, 581.

DATURIA.

Daturine.

Dose.—$\frac{1}{120}$ to $\frac{1}{60}$ grain increased to $\frac{1}{16}$ or more, in solution with diluted sulphuric acid.

An alkaloid obtained from *Datura Stramonium*. In crystals resembling atropine, but lighter and more feathery in appearance. That generally met with is the "light Daturine" of Ladenburg, and, according to him, it consists principally of pure hyoscyamine.—See Atropine, p. 51. The author has found that the commercial Daturine was a stronger base than hyoscyamine, but weaker than atropine. It has allied chemical and physiological properties to atropine and hyoscyamine, and is used for ophthalmic purposes to dilate the pupil, &c. The salt

Daturiæ Sulphas is generally employed. It is in minute, white, granular crystals, readily soluble in water.

Guttæ Daturiæ, R.O.H.

Sulphate of Daturine ...	2 grains.
Distilled Water	1 ounce.

Reference.

Given to a patient suffering from acute mania, it acted like hyoscyamine and atropine in producing sleep.—R. and Pr. xviii.166.

DELPHINIA.

Syn.—DELPHIA, DELPHINE.

Dose.—$\frac{1}{4}$ to $\frac{1}{2}$ grain in a pill, with glycerine of tragacanth, every 3 or 4 hours.

A white or brownish white amorphous alkaloid obtained from seeds of stavesacre, *Delphinium Staphisagria*, and of larkspur, *Delphinium consolida*. Almost insoluble in water, soluble in alcohol, ether, and dilute acids.

Reference.

Has been given internally in doses as above, in dropsy and spasmodic asthma. Locally 10 to 30 grains to an ounce of rectified spirit, or an ointment containing the same quantity causes tingling and transient redness like veratria; useful in neuralgia, earache, and toothache.—Stillé and Maisch.

DIGITALINUM.

Digitalin (*Off.*).

Dose.—$\frac{1}{80}$ to $\frac{1}{30}$ grain in a pill.

The Digitalin of Homolle is met with in commerce as an amorphous yellowish-white powder or small scales, inodorous but irritating to the nostrils, is intensely bitter and poisonous, and possesses the well-known properties of the foxglove, *Digitalis purpurea*, from which it is obtained. Is used to lessen fever and acute inflammations, also in heart diseasé with rapid weak pulse, and for cardiac dropsy, for internal hæmorrhages, delirium tremens, and spermatorrhœa.

Digitalein of Schmiedeberg (P.J. 1875,741) is soluble in water, possesses active properties like the above, and is suitable for making hypodermic injections; given in the same dose as Digitalin.

References to Digitalin.

Physiological and therapeutical experiments.—M.T.G. i./55,382.

Is 120 times as strong as Digitalis leaves, given in delirium tremens in doses of $\frac{1}{80}$ to $\frac{1}{30}$ grain.—M.T.G. ii./61,106.

Case of poisoning by, with recovery.—L. i./80,166.

Use in heart disease.—B.M.J. ii./71,148.

Antagonism to aconitia.—B.M.J. Rep. 1877,89.

Hypodermic injection of 1 in 500 of equal parts alcohol and water, in dose of 8 minims, acts well.—B.M.J. i./78,535.

Physiological effects on the blood vessels.—L. ii./81, 886.

DUBOISINÆ SULPHAS.

Duboisine Sulphate.

Dose.—$\frac{1}{120}$ to $\frac{1}{30}$ grain.

The Sulphate of Duboisine, an alkaloid obtained from the leaves of *Duboisia myoporoides*. The salt is usually met with in golden-yellow scales (not crystals), very hygroscopic and readily soluble in water. The alkaloid

Duboisine has been crystallized, but is not yet in commerce in this condition. According to Ladenburg, it is identical with pure hyoscyamine (see Atropine) and isomeric with atropine, but it appears to possess more powerful physiological properties than either of these as they are found in commerce. The Sulphate of Duboisine is a costly salt as yet. A solution of 1 grain to the ounce is strong enough for most ophthalmic purposes.

References.

Chemical notes on its isolation.—P.J. 1878,787.

Physiological action. It dilates the pupil, dries the mouth, checks perspiration, causes headache and drowsiness, antagonises muscarine, on the eye it acts more promptly than atropine.—L. i./78,304.

Eight cases of toxic symptoms, giddiness, delirium, and dryness of the mouth from use of eyedrops 4 grains to the ounce.—L. ii./79,353.

As a mydriatic is much stronger than atropine. Its use requires care—it is apt to produce giddiness, &c., and even delirium.—L. ii./79,441.

Physiological properties and medicinal use as a mydriatic; a résumé.—B.M.J. ii./79,362.

Its action relative to atropine, physiologically, &c.—Pr. xxiii.246.

Therapeutic and physiological effects—Differs from atropine by the persistence and greater rapidity of its action on the muscle of accommodation; is a useful calmative in maniacal delirium; as a sedative ointment, 1 in 500 of vaseline applied night and morning is useful in inflammation of the cornea.—Pr. xxv.294.

Résumé of its physiological properties.—L. ii./81,806; B.M.J. ii./81,529; Trans. Med. Congress, 1881,i.511.

In exophthalmic goitre, $\frac{1}{120}$ grain 2 or 3 times a day gives great relief.—B.M.J. i./83,958.

ELATERIUM

Elaterium (*Off.*).

Dose.—$\frac{1}{16}$ to $\frac{1}{2}$ grain.

Is a powerful hydragogue cathartic, useful in renal or cardiac disease complicated with dropsy.

Preparations.

Pulvis Elaterii Compositus (*Off.*).

Dose.—½ to 5 grains. Consists of Elaterium 1, Sugar of Milk 9.

Tinctura Elaterii Composita.

Elaterium	1 grain.
Compound Tincture of Chloroform	1 ounce.

Dose.—10 to 30 minims.

It is preferable to add the chloroform (which is a ready solvent of Elaterin) of the tincture first, macerate 2 days, then add the rectified spirit and compound tincture of cardamoms, macerate 5 days more and filter. This preparation is more active than a corresponding dose of the powder.

Elaterin.

Syn.—MOMORDICIN.

Dose.—$\frac{1}{40}$ to $\frac{1}{6}$ grain.

The neutral active principle of Elaterium, is in colourless, hard, acicular crystals, insoluble in water, soluble in chloroform and hot alcohol.

ELIXIRS.

These form in America an agreeable and popular mode of administering various medicines. They are generally composed of a weak-flavoured syrup, with a fair proportion of alcohol, which latter may account for much of the esteem with which they are popularly held.—P.J. 1874, 682.

Elixir Simplex.

Spirit of Orange (Oil 1, Rect. Spt. 9)	½ ounce.
Rectified Spirit	4½ ounces.
Distilled Cinnamon Water...	6 ounces.
Syrup	6 ounces.

Mix and filter.

Dose.—20 minims to 1 drachm. This quantity may be added to the ounce of any liquid medicine.

Elixir Bismuthi.

Citrate of Bismuth ...	160 grains.
Distilled Water	2 ounces.
Solution of Ammonia...	2 drachms, or more if needed to dissolve the bismuth.

Dissolve, filter, and add

Simple Elixir to ...	10 ounces.

Dose.—1 drachm = 2 grains citrate of bismuth.

Elixir Camphoræ.—See p. 69.

Elixir Camphoræ Monobromatæ.—See p. 70.

Elixir Cinchonæ.

Tincture of Yellow Bark ...	2 ounces.
Simple Elixir	14 ounces.

Mix and filter.

Dose.—1 drachm = 2 grains of bark.

Elixir Guaranæ.—See Guarana, p. 146.

Elixir Phosphori.—See Phosphorus, p. 208.

Elixir Rubrum.

Solution of Carmine (p. 76)	1 drachm.
Simple Elixir to	8 ounces.

Mix.

Dose.—20 minims to 1 drachm.

Gives an agreeable flavour and colour to liquid medicines, but is not compatible with acids.

Elixir Acidum (Haller's Acid Elixir).

Syn.—Liquor Acidûs Halleri (Danish P.).

Dose.—2 to 8 minims.

Strong Sulphuric Acid,
Rectified Spirit, of each equal weights.

Mix carefully and gradually.

Austrian P. has Liquor Acidus Halleri 1 to 3 of spirit (weight); German P., Mixtura Sulphurica Acida 1 to 3 (weight); Codex, Acide Sulfurique Alcoolisé 100 to 300, and red poppy petals 4 (weight); and T.H., Acidum Sulphuricum Alcoholisatum 15 to 105, and oil of sage 1 (measure). In all these much of the sulphuric acid is in the form of ethyl-sulphuric acid (sulphovinic acid), which is more agreeable in taste than diluted sulphuric acid. If mixed with sweetened water, they form agreeable cooling drinks, useful in checking excessive perspiration. In acidum sulphuricum aromaticum, B.P.—elixir of vitriol, a weak form of the old Mynsicht's Elixir Vitrioli—ethyl-sulphuric acid is formed on keeping, but not much while making it. The preparation would be improved by carefully heating the mixture of acid and spirit to encourage the formation of the vinous acid

EMBLICÆ FRUCTUS.

Emblic Myrabolan Fruit.

Dose.—One or two as required. The taste of the pulp is very agreeable.

The fruit preserved in sugar of *Phyllanthus emblica, Myrabolanus emblica, Emblica officinalis*, or Nilicamam (*Hindi*). It is used in India to excite the appetite, and taken after meals for atonic dyspepsia. In the fresh state, the fruit consists of a fleshy, acidulous pulp enveloping an angular nut. The pulp is rather austere, and is possessed of purgative properties.

The fresh juice is cooling, diuretic, and laxative. The confection promotes the appetite, and acts as a tonic. —Dutt's Hindu Materia Medica.

Tried carefully in several cases of habitual constipation; is a valuable addition to our list of laxatives. It may be taken at dinner or dessert. It is most valuable for children.—B.M.J. ii./82,173.

Confectio Emblicæ.

The fruit, pulped and freed from nuts, &c.

Dose.—1 or 2 teaspoonfuls.

EMETIA.

Emetine.

Syn.—EMETINA.

Dose.—$\frac{1}{200}$ to $\frac{1}{50}$ grain, as an expectorant; $\frac{1}{6}$ to $\frac{1}{3}$ grain as an emetic.

An alkaloid obtained from *Cephaëlis Ipecacuanha*, as met in commerce, is in pale, brownish-white, amorphous masses, sparingly soluble in water and ether; freely soluble in alcohol, chloroform, and dilute acids. It can be obtained in white crystals, which turn yellow exposed to sunlight. It irritates the skin applied locally, producing pustules, like tartar emetic. Two grains suffice to kill a dog. It is a powerful emetic and depressent. Ipecacuanha yields about 1 to 1½ per cent. of Emetine.

Emetin—Extractive.

Dose.—Expectorant $\frac{1}{10}$ to $\frac{1}{15}$, emetic ½ to 1 grain, in pill or solution.

An extractive substance, soluble in water, is made as a commercial article, and must be distinguished from the above.

Trochisci Morphiæ et Emetin contain $\frac{1}{40}$ grain of Morphia and $\frac{1}{80}$ grain of Emetin in each.

Emetine is an emetic by reflex action, reduces the respiration and circulation, and it combats the convulsions caused by strychnia.—B.F.M.C.R. ii./74,247.

Physiological properties.—Its action seems to be limited to the peripheric extremities of the vagus nerve. —L. ii./74,532.

Abstract of physiological properties.—L. i./80,500.

ERGOTA.

Ergot of Rye (*Off.*).

Syn.—SECALE CORNUTUM.

Dose.—10 to 30 grains in recent powder infused in boiling water.

Extractum Ergotæ Liquidum, *Off. Dose* 10 to 60 minims, 1 = 1 of Ergot.

Infusum Ergotæ, *Off. Dose* 1 to 2 ounces, 1 = 40.

Tinctura Ergotæ, *Off. Dose,* 15 to 60 minims, 1 = 4.

Therapeutic uses of Ergot.—Pr. i.161.

Acidum Scleroticum.—See p. 114.

Ergotina, Ergotin.

Syn.—BONJEAN'S ERGOTIN.

Dose.—1 to 3 grains, in a pill (with althæa) or hypodermic solution.

The purified aqueous extractive of ergot. As found in English commerce, it is a dark-brown extract, having the odour of roast beef,—sometimes desiccated, and in brittle lumps, very hygroscopic, and freely soluble in water. It is given to check all forms of passive hæmorrhage.

Injectio Ergotinæ Hypodermica.

Ergotin 1 grain, in distilled water to 2 minims.

Dose.—2 to 6 minims.

Should be freshly prepared, or, if required to be kept, 1 per cent. of carbolic acid should be added to the solution.

Cases of aneurism — one subclavian and one radial cured by subcutaneous injection of Ergotin.—Pr. ii.310.

A dose given in the St. André Hospital, Bordeaux, after operations to lessen suppuration.—Pr. ii.61.

For hæmoptysis of tubercle, doses of 1 to 1½ grain, and in intestinal hæmorrhage of typhus.—M.T.G. ii./72,549.

Hæmorrhage, to check external or internal, especially in scrofulous persons.—M.T.G. i./74,537.

Epistaxis — hypodermic injection of, into the arm of 3 grains in 10 minims of warm water, is found of the greatest success.—Br. i./75,308.

Epistaxis occurring in the course of a case of trichinosis, Ergotin used as a styptic, also suggested to be used as a killer of the trichinæ.—Pr. xxi.462.

Uterine fibroid, successful treatment of, by hypodermic injections deeply into the muscles of the buttock, of 2 to 5 grains of Ergotin, and 4 grain Ergotin suppositories; use of these continued 5 days previous to periods.—Pr. xxii.32.

Thèse, abstract of, on its hæmostatic action by hypodermic injection.—Pr. xxiv.130.

In erysipelas, 1 in 50 of water, locally applied, reduces the heat, pain, and swelling.—B.M.J. ii./81,935.

In prolapsus ani, 3 to 4 grains, injected into the sphincter or prolapsus every 2 or 3 days, cured in a few weeks.—Pr. xxvii.369.—2 Pr. xxx.453.

A dose of Ergotin, injected deeply into the gluteal muscles just before delivery, seldom fails to give perfect uterine contraction.—Br. i./81,lxviii.

Use in cerebral affections; Ergotin seems to have a powerful action over certain disturbances of speech in which patients utter words they do not intend to pronounce.—M.R. 1882, 496.

In Pertussis, is without a doubt a valuable remedy.—Pr. xxviii.359.

Ergotin causes spasm of arterioles and rise of blood pressure, by acting directly on the vessels independently of the central nervous system.—B.M.J. i./84,97.

Ergotininum, Ergotinine.

A whitish amorphous alkaloid (can be with difficulty crystallized), insoluble in water, soluble in alcohol, ether, chloroform, and dilute acids; solutions in the latter readily decompose on exposure to the air, slight heat, or alkaline reagents; sulphuric acid with a trace of ether turns it to a yellow red, then blue violet colour.

Ergotinine, 1; lactic acid, 2; chloroform water to 1,000, forms a **Hypodermic Injection** which is quick in action in dose of 5 to 10 minims, repeated if needed to the extent of 20 minims. It is costly.—L. ii./82,945.

Liquor Ergotæ Ammoniatus.—1 = 1 of Ergot.

Dose.—10 to 60 minims.

A preparation in which Ergot is exhausted by ammoniated proof spirit.

Pharmaceutically, it has been found that ammonia not only exhausts Ergot of its active medicinal properties, but also secures a uniform, stable, liquid preparation; whilst, therapeutically, the combination of ammonia and Ergot is indicated in some forms of post-partum hæmorrhage, &c.

A remarkably active preparation of the drug.—L. i./76,93; B.M.J. i./76,89.

A more efficient and reliable preparation, as powerful in action, if not more so, than the fresh infusion prepared from recently-powdered Ergot.—L. i.77,115.

Acidum Scleroticum, Sclerotic Acid.

Syn.—SCLEROTINIC ACID.

Dose.—½ to ¾ of a grain hypodermically.

This weak acid principle is, according to Dragendorff, the most active of a series of preparations he has obtained from Ergot. It is uncrystallizable, has a pale brown colour, darkens with age, is hygroscopic, and freely soluble in water.

Injectio Acidi Sclerotici Hypodermica.

One grain in distilled water to 6 minims.

Dose.—3 to 5 minims.

Should be freshly prepared, or, if required to be kept, 1 per cent. of carbolic acid should be added to the solution, as it is prone to change.

As a hæmostatic Sclerotic Acid possesses all the virtues of Ergot. Injected hypodermically, it is preferred to Ergotin, as it causes no inflammation at the seat of puncture.

Accounts of its chemical preparation.—P.J. 1876, 1001; P.J. 1877,106.

Note on its physiological and therapeutic properties. It accelerates the intestinal peristalsis, and excites contraction both of the pregnant and non-pregnant uterus, pre-existing contractions being intensified. Not a powerful poison, 0·02 to 0·03 gramme being a dose by hypodermic injection.—M.T.G. ii./79,642.

ERYTHROPHLŒUM.
Casca Bark.

Syn.—SASSY BARK; ORDEAL BARK.

The bark of *Erythrophlœum Guineense*, a leguminous tree, has an action resembling that of digitalin and picrotoxin combined. Its powder causes most violent sneezing, and it is a powerful poison. It contains an alkaloid—Erythrophlœine, not as yet crystallized nor yielded crystallized salts.—P.J. 1876,77.

Erythrophlœiæ Hydrochloras.

Dose.—(?)

A yellowish brown granular powder, readily soluble in water. The solution has an acrid, bitter taste. Has the combined action of digitalin and picrotoxin—5 milligrammes ($\frac{1}{13}$ grain) produced cramps, and was fatal to cats and guinea pigs,—for dogs a somewhat larger dose was required.—Archiv für exp. Path. u. Pharm. 1882,483.

Tinctura Erythrophlœi.

1 in 10 of rectified spirit.

Dose.—5 to 10 minims.

In mitral disease and cardiac dropsy depending on it, it is a more powerful remedy than digitalis, its effects on the arterioles is greater, and is useful in dilated heart. — B.M.J. i./77,345,379; B.M.J. i./78,490; L. i./83,185.

Physiological action.—Phil. Trans. Roy. Soc. clxvii. pt.2,627.

Eserine.—See Physostigma, p. 210.

ETHIDENI DICHLORIDUM.
Dichloride of Ethidene.

Syn.—MONOCHLORETHYL-CHLORIDE; OR CHLORINATED CHLORIDE OF ETHYL.

A colourless volatile liquid possessing the odour and taste of chloroform. It is said to be identical with Chloride of Ethylidene, which is obtained as a bye-product in the manufacture of chloral, or may be made by the action of pentachloride of phosphorus on aldehyde, but a much more certain and uniform product may be obtained if made as the Monochlorethyl-Chloride, the preparation first used by Snow. It has Sp. Gr. about 1·2, boiling point 135° to 150° F. (147·2° Regnault). It is isomeric with chloride of ethylene (Dutch liquid), but the boiling point and Sp. Gr. of the latter are higher. Dichloride of Ethidene is miscible in all proportions with pure ether, alcohol, and chloroform, soluble about 1 in 300 in water, being less so than chloroform.

It is a much safer anæsthetic than chloroform, but more costly.

References.

It was used as an anæsthetic by Dr. Snow, who died while finishing his work on anæsthetics. He was taken ill while writing on this liquid; in the middle of a sentence he wrote his last word on the page. The word was "exit."—M.T.G. i./70, 642; P.J. 1870,3.

Compared with chloroform, Dichloride of Ethidene is pleasanter, more rapid in action, causes no excitement during nor after administration, more rapid recovery from it, and altogether there is less danger attending its use. Children require about 1 drachm, adults 4 or 5 drachms.—Steffen in Binz.

A dog will live for a lengthened period in a state of complete anæsthesia under the influence of Ethidene Dichloride, whilst it will die in a short time when chloroform is used. The circulation is more easily re-established when the cessation is due to Ethidene than to chloroform, but not so quickly as when due to ether. Ethidene reduces the blood pressure by regular gradations, and not, as with chloroform, by sudden and unexpected depressions. Under the use of Ethidene, there was, on no single occasion, an absolute cessation either of the heart's action or of respiration, although they are sometimes very much reduced. The disadvantages of ether in affecting respiration are, to a great extent, obviated by the use of Ethidene, whilst the dangers of chloroform are reduced to a minimum.—Reports of the Glasgow Committee on the action of Anæsthetics. B.M.J. i./79,2; B.M.J. ii./80,957.

As an anæsthetic preferred to bromide of ethyl.—B.M.J. i./80,586.

Lecture on use in 287 cases of major surgery and 1,565 cases of minor; one death.—B.M.J. i./80,797.

Used in six cases as an anæsthetic, all presented the appearance of a strong stimulant to the heart's action at the commencement of the administration, only one was sick; a good anæsthetic for children.—M.T.G. i./79,62.

For operations on the eye, the writer is confident it is the best anæsthetic yet in use.—B.M.J. i./81,30.

Report of death from, result not attributable wholly to the anæsthetic.—B.M.J. i./81,385.

Arrest of the heart's action and recovery. It depresses more quickly and markedly than chloroform, but less persistently; on removing inhaler and allowing an inspiration of air, effects at once pass off.—B.M.J. i./81,431.

Action on the frog's heart like that of chloroform.—Pr. xxvii.13.

Death from, during eye operation.—L. i./83,143.

Note on administration of.—L. i./83,253.

EUCALYPTI FOLIA.

Eucalyptus Leaves.

Dose.—5 grains or more in powder.

The dried leaves of *Eucalyptus Globulus*, or blue gum-tree of Australia, have been employed medicinally in the treatment of ague and bronchitis, and are now much used in Italy for Roman and malarial fevers; also, when coarsely powdered, are employed for smoking in cigarettes in cardiac and aneurismal asthma. The narrow leaves, mostly scimitar-shaped, are more active medicinally than the broad leaves of herbaceous shoots. No alkaloidal principle has been discovered in them, or in the bark of the tree, which also has been used in surgery. The medical properties are principally due to a volatile oil, which is now largely imported.

Oleum Eucalypti.

Dose.—1 to 5 minims emulsified, or mixed with olive oil.

Is principally distilled from the leaves of *Eucalyptus amygdalina* as well as *E. Globulus* and probably other species. It is to this oil, and partially to the great avidity the tree has for water when growing, that the latter owes its anti-malarial influence. The oil is a powerful antiseptic, and has an ozonising influence on the atmosphere while it oxidises. It has a pale yellow colour, a penetrating camphoraceous odour, Sp. Gr. about 0·900, and boils between 338° and 392° F. It is not caustic, like carbolic acid, nor does it produce much irritation when applied to the skin or mucous membrane, although it is very destructive to low organic growths. It is soluble in oils, fats, paraffins, and alcohol, but only a trace dissolves in water. An emulsion may be made by putting eqnal quantities of powdered gum arabic and the oil into a dry bottle, adding 40 parts of water, more or less, and shaking well. This is useful as a urethral injection or lotion, and may be given internally in 1 to 4-drachm doses.

The oil is useful mixed with an equal quantity of olive oil as a rubefacient for rheumatism.

A large percentage of Eucalyptus oil consists of **Eucalyptol,** which is also met with in commerce, and is that portion of the above oil which passes over between 338° and 352° F. It is obtained by treating the latter with caustic potash, then with chloride of calcium and subsequent distillation. Later researches have proved that it is a mixture of Terpene and Cymene.

Preparations.

Eucalyptus Gauze, Carbasus Eucalypti. In 6-yard pieces.

Unbleached cotton gauze, impregnated with

Oil of Eucalyptns	1
Dammar Resin	3
Paraffin Wax	3

An antiseptic surgical dressing. In using it there is no danger of poisonous absorption of the antiseptic, as with carbolic acid gauze.—L. i./81,828; B.M.J. i./81,850.

Iodoform and Eucalyptus Bougies.—See Iodoform, p. 154.

Tinctura Eucalypti Foliorum.

One part of leaves with proof spirit to produce 5 parts of tincture.

Dose.—15 minims to 2 drachms.

Unguentum Eucalypti.

Paraffin Wax (135° to 140°)	2 ounces.
Vaseline	2 ounces.

Melt, and add while hot

Oil of Eucalyptus	1 ounce.

Stir till cold. A mild antiseptic dressing.

Unguentum Iodoformi et Eucalypti.—See Iodoform, p. 156.

History of the drug, its uses and botanical origin. Is a febrifuge, the leaves are also employed as a healing application to wounds.—M.T.G. i./74,540; P.J. 1874, 872; P.J. 1879,865.

Ague, rapid cure of, by 1 to 2 drachm doses of the tincture.—Pr. xviii.366.

In ozœna, bronchitis with profuse foul expectoration, and uterine catarrh, tincture and infusion used both internally and externally.—Pr. xx.206.

Tincture used in intermittent fever.—Pr. xx.411; Pr. xxiv.138.

In diphtheria, a mixture of 5 grammes of oil, 25 grammes of rectified spirit, and 170 grammes of water used for 10 inhalations, or equal parts of the oil and rectified spirit, of which 10 to 60 drops were used for an inhalation.—M.T.G. ii./79,214.

Oil of Eucalyptus is a powerful antiseptic—more than three times as strong as carbolic acid in preventing development of bacteria, and not so poisonous. 80 minims may be taken in 2½ hours.—Pr. xxv.212.

As a surgical dressing, gauze dipped in a solution of the oil 3, alcohol 15, and water 150. This gauze may be left undisturbed 4 or 5 days.—L. ii./80,387.

Air impregnated with Eucalyptus oil vapour recommended as a substitute for the carbolic spray.—B.M.J. ii./82,420.

Pessaries, composed of 6 drachms of Eucalyptus oil, and 4 drachms each, of oil of theobroma and white wax divided into 12, one night and morning, or at night only, found useful after parturition, checks fetor and decomposition of lochial discharge; and 5 minims of Eucalyptus oil mixed with 20 of olive oil, used and recommended as a hypodermic injection for pyæmia.—L. ii./82,343.

Use of steam from the infusion of leaves in infectious diseases, especially diphtheria.—L. i./83,316; vapor of Eucalyptus oil used for diphtheria.—L. ii./83,362.

EUCALYPTI GUMMI.

Eucalyptus Gum.

Syn.—Red Gum.

Dose.—2 to 6 grains. May be made into pills with mucilage of acacia and a trace of glycerine, quickly manipulated.

An inspissated secretion from *Eucalyptus rostrata* and *corymbosa* and probably other species imported from Australia. It is semi-translucent and garnet-coloured, not so dark as, but resembling, kino in appearance. Soluble in water, tough and difficult to powder, it adheres to the teeth when chewed, is intensely astringent to the mucous membrane, useful in diarrhœa, relaxed throats, and given with success to check the purging of mercurial pill administered for syphilis.

This gum should be distinguished from the common Australian or Botany Bay kino, said to be the produce of *E. resinifera*. The latter is very resinous and little soluble in water.

Preparations.

Decoctum Eucalypti Gummi.

Eucalyptus Gum	1
Distilled Water	40

Boil till dissolved and strain. Used as gargle, and given for diarrhœa in 2 to 4 drachm doses.—L.ii./83,1029.

Extractum Eucalypti Gummi Liquidum.

Eucalyptus Gum	1
Distilled Water	3

Dissolve by constant shaking and strain.

Dose.—30 to 60 minims in water.

A styptic. Injected into the nostril stops bleeding from the nose, and applied on lint arrests hæmorrhage from wounds. A tablespoonful to a pint of water forms an astringent injection for the vagina or bowel (Squire). This dilution may be also used as a gargle.

Insufflatio Eucalypti Gummi.

Eucalyptus gum in fine powder.	
Starch in powder, of each ...	¼ grain.

Applied by means of an insufflator, is a powerful astringent in hæmorrhage and relaxed conditions of the larynx and trachea. It does not thus affect the palate or appetite.

Syrupus Eucalypti Gummi (Squire).

Liquid Extract of Eucalyptus Gum	5 ounces.
Sugar	3 ounces.

Dissolve.

Dose.—30 to 60 minims.

Tinctura Eucalypti Gummi (Squire).

Eucalyptus Gum	1 ounce.
Rectified Spirit	4 ounces.

Shake till dissolved and strain.

Dose.—20 to 40 minims. 1 part to 7 of water forms a very astringent gargle.

Trochisci Eucalypti Gummi.

Contain 1 grain in each, combined with fruit paste.

Trochisci Eucalypti Compositi (L. Browne).

Contain in each

Chlorate of Potassium	2 grains.
Cubeb Powder	¼ grain.
Eucalyptus Gum	1 grain.

With fruit paste, and are marked C.E.

Useful in congested and relaxed throats, especially when accompanied by arrest of mucous secretion.

EUONYMIN.

Dose.—½ to 5 grains. In a pill, with extract of henbane or glycerine of tragacanth.

The powdered extractive of a dark olive-brown colour generally, obtained from the bark of the root of the wahoo or spindle-tree—*Euonymus atropurpureus.* Possesses tonic, hydragogue, cathartic, diuretic, and antiperiodic properties. A so-called glucoside Euonymite has been obtained from it which is identical with Dulcite.

Pilula Euonymin.

Euonymin	2 grains.
Extract of Henbane	*q.s.*

To make one pill; take at bedtime. A cholagogue stimulant, producing no depression or headache; requires to be followed by a saline aperient in the morning. —Pr. xxiii.335.

A powerful hepatic stimulant, but not nearly so powerful an irritant of the intestine as podophyllin.—B.M.J. Rep. 1878,63; B.M.J. i./79,177.

One grain, combined with 4 grains iridin, is a successful purging dose.—B.M.J. ii. 79,932.

Tinctura Euonymi.

Dose.—10 to 40 minims, is prepared from 1 of young bark of Euonymus in 4 of rectified spirit.

EXTRACTUM CARNIS.

Extract of Meat.

Syn.—LIEBIG'S EXTRACT. Sold retail in 2, 4, and 16 oz. jars.

This extract is principally prepared in South America and Australia, where meat can be obtained cheaply. It is of a brown colour, and has an odour of roast meat. It is prepared by concentrating by evaporation, an aqueous infusion of meat. During the process, the fat and albumen are separated. It contains little or no gelatine, but consists of creatin, creatinin, globulin, and urea, with organic potash and other salts. It has been much overestimated as a food, either for invalids or healthy persons; still it is often valuable as a flavouring to add to soups, beef-tea, &c., and it is a *nervous* food allied to tea. A quarter of a teaspoonful or more may be added to a breakfast-cup full of boiling water, with salt to taste, to form a beef-tea.

The other preparations of meat sold for medicinal use are:—

Concentrated Beef-Tea (Brand's).

A firm jelly, sold in ¼ and ½ lb. tins, also in skins, contains the natural gelatine of the meat, and, diluted, forms a nutritious substitute for true beef-tea.

Essence of Beef (Brand's).

Sold in ¼ lb. tins.

A soft, transparent, amber-coloured jelly, prepared from beef by exhausting with tepid water. It is agreeable to the palate and stomach of a delicate invalid; will often be relished when all other food is repelled, and is useful in allaying obstinate vomiting. It is best taken cold by teaspoonfuls, as desired, with or without a little bread and wine. A similar preparation is made from chicken.—M.T.G. i./61,536,587.

Meat Lozenges (Brand's).

Sold in boxes; are savoury, gelatinous essence of beef lozenges, and contain substantial support for travellers in a portable form.

Peptonised Beef Jelly.—See Pancreas, p. 196.

Meat Juice (Valentine's).

Sold in 2 oz. bottles.

A dark, reddish-brown liquid preparation of meat, imported from Richmond, U.S.A. It is the expressed juice of meat concentrated at a low temperature in vacuo. A teaspoonful is added to 3 tablespoonfuls of cold or tepid water, and taken in tablespoonful doses or more for sickness or exhaustion. Hot water coagulates the albumen in it.

Sanguis Bovinus Exsiccatus, Desiccated Blood.

Blood freed from fibrin, evaporated, at a low temperature, to dryness. Is in blackish-red, opaque scales, like tartarated iron in appearance, readily soluble in cold water. One part in 8 of tepid water may be used as an enema; the same strength, with the addition of a little glycerine and brandy, to keep the mixture, is recommended to be given in tablespoonful doses; or it may be given powdered, put into gelatine capsules.

Useful as a nutritive enema.—L. i./81,322.

Use in puerperal insanity as enema.—L. ii./83,278.

FERRI BROMIDUM.

Bromide of Iron.

Dose.—3 to 10 grains.

Prepared by the direct combination of bromine with metallic iron in the presence of water, and evaporating the solution till, when cooled, it will solidify. In greyish-white deliquescent masses, which, on exposure to the air acquire a brown colour from oxidation.

Syrupus Ferri Bromidi.

Bromide of Iron	160 grains.
Iron Wire, polished ...	10 grains.
Distilled Water	3 drachms.

Heat together till, on filtering, the solution passes almost colourless; when the liquid ceases to pass, wash the filter with a few drops of distilled water, and add the whole of the filtrate to

Syrup *q.s.* to	4 ounces.

Mix.

Dose. —1 drachm = 5 grains of the salt.

Syrupus Ferri Bromidi cum Strychniâ.

Dose.—1 drachm = $\frac{1}{32}$ grain Strychnia and about 5 grains of Bromide of Iron.

Strychnia ... ... 1 grain.
Hydrobromic Acid ... ... 1½ drachm.

Dissolve and add

Syrup of Bromide of Iron to 4 ounces.

Mix.

In one drachm of each of the last two syrups one grain of hydrobromate, or, preferably, acid-hydrobromate, of quinine is dissolved to form respectively,

Syrupus Ferri Bromidi cum Quiniâ, and
Syrupus Ferri Bromidi cum Quiniâ et Strychniâ.

FERRI PERCHLORIDUM.

Perchloride of Iron.

(With 12 molecules of water of crystallization.)

Dose.—2 to 8 grains.

The official preparations of Perchloride of Iron are :—Liquor Ferri Perchloridi, *dose*, 10 to 30 minims ; Liquor Ferri Perchloridi Fortior, *dose*, 2 to 8 minims; and Tinctura Ferri Perchloridi, *dose*, 10 to 30 minims. They are incompatible with infusions, &c. containing tannin, with the alkalies, alkaline carbonates, and mucilage of acacia. The tincture is the most generally used, and most valued preparation of iron for internal administration in anæmia, chlorosis, &c. If diluted from well-prepared strong Liquor, the tincture is more stable than the weak Liquor, which, for economy's sake, often supplants it. The strong Liquor is generally employed topically as a styptic or pigment; for this purpose, it has the disadvantage of containing a little more free acid than chemically neutralises the iron as perchloride. As a hæmostatic, therefore, the solid crystallized perchloride of iron containing 12 molecules, 40 per cent. of water, or a strong solution of it, is preferred. This salt is prepared by carefully evaporating the stronger official solution and setting aside to crystallize. It is in pale orange-yellow opaque crystalline masses, very deliquescent, and entirely soluble in water. A crystalline perchloride of iron, containing only five molecules of water, is much used in France; it is in drier masses, but does not make a bright solution. The anhydrous perchloride, having such great affinity for water, would act as a powerful caustic.

A **Liquor Ferri Perchloridi Fortior** of B.P. Sp. Gr. 1·44 may be made from the first-named salt by dissolving

Perchloride of Iron, with 12Aq.	5 parts.
Distilled Water	2 parts.

In T. H. the salt is ordered in

Injectio Ferri Perchloridi, 60 grs. in	1 oz.
Pigmentum Ferri Perchloridi Dilutum, 60 grs. in... ...	1 oz.
Pigmentum Ferri Perchloridi Forte, 120 grs. in	1 oz.
Nebula Ferri Perchloridi, 3 grs. in	1 oz.

Glycerine modifies the styptic properties of Perchloride of Iron partially by its viscosity, and partially by reducing it from the ferric to the ferrous state, and thus covers its metallic astringent taste when given internally.

In post-partum hæmorrhage Perchloride of Iron is of great service. Soak a sponge, fixed on a whalebone stem, in a mixture of one volume of the stronger liquor Ferri Perchloridi B.P. (= 1 part of solid, which is more styptic and portable) with three volumes of water, and pass into the cavity of the uterus as a swab.—Barnes' Obstetric Operations, 3rd edit., 476. Also used as an injection, 1 of solid to 10 of water.

Mistura Ferri Amara.—U.C.H.

Solution of Perchloride of Iron	30 minims.
Spirit of Chloroform... ...	5 minims.
Infusion of Quassia ... to	1 ounce.

Mix.

Mistura Ferri Aperiens.—U.C.H.

Sulphate of Magnesia	60 grains.
Sulphate of Iron	4 grains.
Diluted Sulphuric Acid	9 minims.
Peppermint Water	to 1 ounce.

Dissolve and mix.

Mistura Ferri Perchloridi.—U.C.H.

Solution of Perchloride of Iron	15 minims.
Spirit of Chloroform	9 minims.
Glycerine	9 minims.
Water	to 1 ounce.

Mix.

Mistura Ferri Salina.—U.C.H.

Citrate of Potash	22 grains.
Solution of Perchloride of Iron	24 minims.
Spirit of Chloroform	9 minims.
Water	to 1 ounce.

Dissolve and mix.

The styptic taste of iron is masked in this mixture, as a double decomposition occurs between the iron and the potash salt.

Liquor Ferri Chloroxidi.

Stronger Solution of Perchloride of Iron	4 ounces.
Distilled Water	2 pints.

Mix, and add in excess,

Solution of Ammonia	*q.s.*

Collect, wash well the precipitate, and dissolve it without heat in

Stronger Solution of Perchloride of Iron	1 ounce.
Distilled Water, to make when filtered	1 pint.

Dose.—10 to 30 minims.

The above makes a basic solution of Ferric Chloride, of the same strength as the tincture. By placing this solution on a septum floating in water, it may be further freed from chloride, become less styptic in taste, and forms

Liquor Ferri Dialysatus.

Dose.—10 to 30 minims.

The two last preparations, made as directed, are deep blood-red in colour, and contain 4 per cent. of ferric chloride nearly. The strength of the latter will be slightly variable, as some of the iron passes through the septum. The manufacturers' processes for making it vary; it is, in reality, *un*-dialysed, or colloid, iron, as it does not pass through the septum; doubts have, therefore, been cast on its digestibility and its utility as a medicine.—P.J. 1880,639,709,723.

These two preparations of iron are useful when the strong acid preparations of iron cannot be borne by the stomach, but they are compatible with few other medicines, they will not bear dilution with common water, or with much distilled water without depositing the oxide. They ought, therefore, to be supplied to the patients as "drops," undiluted, or mixed with glycerine. —See below.

Dialysed iron is useful as an antidote to arsenic—much superior to the moist peroxide; 1 ounce doses should be given repeatedly, preceded by a dose of common salt or bicarbonate of soda.

Glycerinum Ferri Dialysati.

Dialysed Iron Solution ...	20 minims.
Glycerine	40 minims.

Keeps well, and is palatable.

Dose.—1 drachm.

Syrupus Ferri Dialysati.

Dose.—1 drachm (contains 20 minims of liquor). Is a very unstable preparation.

References.

Experiments as to the antidotal value of dialysed iron solution.—P.J. 1878,281,569,1001.

Arsenical poisoning case recovered by treating with 2 drachm doses given diluted with water frequently.—P.J. 1878,570.

The chloroxide solution in treating a case of extreme anæmia during nine weeks, increased the number of red-blood corpuscles from 26 per cent. to 92 per cent.; in another case, patient taking Liq. Ferri Chloroxidi, m.xx., cum Liq. Bismuthi et Ammoniæ Citratis, m.xx., ter die, for thirteen weeks, from 47 to 102 per cent.—L. i./78,675; Pr. xxi.1.

FERRI PHOSPHAS.

Phosphate of Iron (*Off.*).

Syn.—FERROUS PHOSPHATE.

Dose.—2 to 10 grains.

Preparations.

Syrupus Ferri Phosphatis (*Off.*).

Dose.—1 drachm, which contains 1 grain of phosphate of iron.

The B.P. process may be simplified as follows :—

Iron Wire, polished...	... 360 grains.
Syrupy Phosphoric Acid, Sp. Gr. 1·500 ...	... 7 ounces.
Distilled Water ...	... 8 ounces.

Place in a glass flask, so that the fluid completely covers the iron wire, plug the neck with cotton wool, and set aside two or three days to dissolve. Then filter and add

Syrup (cold) ...	... 72 ounces.
Distilled Water to ...	... 96 ounces.

Mix. It is best kept in bottles quite full.

Syrupus Ferri et Manganesii Phosphatis.

May be made by dissolving ½ grain phosphate of manganese in each drachm of the last.

Syrupus Ferri Phosphatis Compositus.

Syn.—CHEMICAL FOOD; PARRISH'S SYRUP.

Dose.—1 drachm.

This popular syrup is conveniently made by the following process :—

Iron Wire. polished...	... 300 grains.
Syrupy Phosphoric Acid, Sp. Gr. 1·500 ...	... 8 ounces.
Distilled Water ...	... 5 ounces.

Put these into a glass flask, so that the liquid completely covers the iron wire, plug the neck with cotton wool and set aside two or three days to dissolve. Add the above to the following solution when the latter has cooled :

Slaked Lime ...	... 720 grains.
Syrupy Phosphoric Acid ...	4 ounces.
Distilled Water ...	... 15 ounces.

Mix and add

Carbonate of Potassium ...	72 grains.
Phosphate of Sodium ...	72 grains.

On the addition of the first solution to this a nearly perfect solution will be formed, which filter and set aside. Then take of

Cochineal in Powder ...	240 grains.
Distilled Water	3 pints.

Boil for 15 minutes and filter, pouring over the filter distilled water *q.s.* to produce 56 ounces of filtrate. To this add Refined Sugar ... ... 7 lb.

Heat till dissolved and strain. When cold, add the former filtrate, set aside, and make the whole measure 1 gallon by adding *q.s.* of distilled water. Thus made, the syrup will contain in each drachm about half a grain of Phosphate of Iron and $\frac{4}{5}$ grain Phosphate of Calcium with small quantities of the Phosphates of Potassium and Sodium. As it contains as much of the salts as will be retained in a clear solution, it should be kept in bottles quite full. It is not too nauseous to administer to children, for whom it is frequently prescribed, in teaspoonful doses.

Syrupus Ferri, Quiniæ et Strychniæ Phosphatis.

Syn.—EASTON'S SYRUP.

Dose.—1 drachm, which contains phosphate of iron 1 grain, phosphate of quinine about 1 grain, and strychnia $\frac{1}{32}$ grain.

The original formula was published in Aitken's Practice of Medicine, vol. ii. p. 62, 5th ed. It may be more conveniently prepared, and keeps better, if made as follows:—

Strychnia	8 grains.
Syrupy Phosphoric Acid Sp.Gr. 1·5	2 drachm
Distilled Water	3 ounces.

Dissolve and add

Quinia, pure anhydrous* ...	192 grains.

Heat to dissolve, filter while hot, and add Refined Sugar ... 5 ounces.

Dissolve with heat, strain and add Distilled Water to ... ... 6 ounces.

Shake well. Of this take 1½ drachm and add to 6½ drachms of syrup of phosphate of iron prepared by previous process to form 1 ounce of Easton's syrup.

Caution.—The concentrated syrup should be carefully labelled, with directions how to mix it, and it should not be kept in a very cold place, else it will crystallize. The mixed syrups will contain the same quantities of quinine and strychnia as the original, and, although theoretically about one-sixth less iron, practically it will contain the same, as much of the iron is lost in washing the precipitated phosphate if prepared according to Dr. Easton's formula. In having the syrup of the alkaloids separate from the iron, it keeps much better. The writer finds that it is a reaction between the solution of phosphate of iron and the phosphate of quinine which causes the dark coloration which takes place in this syrup, and this independently of the presence of sugar.

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* Or phosphate of quinine 224 grains, with only 1 in place of 2 drachms of syrupy phosphoric acid, makes a better preparation.

Easton's syrup has its equivalent dose in the following pill, which is portable, tasteless, and readily soluble.

Pilula Ferri (1 gr.), **Quiniæ** (1 gr.), **et Strychniæ** ($\frac{1}{32}$ gr.) **Phosphatis.**

Phosphate of Iron	16 grains.
Quinia, pure (= sulphate 16 grs.)	12 grains.
Strychnia	½ grain.
Syrupy Phosphoric Acid ...	20 drops or *q.s.*

Mix quickly, having first triturated the strychnia with the phosphate, and divide into 16 pills.

FERRO-ALUMEN.

Iron Alum, T.H.

Syn.—Ferri et Ammonii Sulphas, Ammonio-Ferric Alum, U.S.

Dose.—3 to 10 grains, in water.

Pale amethyst octahedral crystals, efflorescent on exposure to the air, odourless, having an acid, styptic taste, and slightly acid reaction; soluble 1 in 3 of water; insoluble in alcohol. Is used internally to arrest hæmorrhage from the kidneys, and employed as an astringent and styptic gargle—8 grains to an ounce—also as a throat spray and pigment.

FUCHSINE.

Rosaniline Mono-Hydrochlorate.

Syn.—MAGENTA ; ROSEINE.

Dose.—½ to 4 grains in a pill, with glycerine of tragacanth.

This aniline product is in brilliant iridescent beetle-coloured crystals, which form an intense deep-red solution in water. Fuchsine is much used for staining histological preparations, and has been used medicinally.

It should be specially prepared for this purpose, and free from arsenic, otherwise it always contains this poison in variable quantity, owing to the process of its manufacture.—M.T.G. i./70,617.

Useful in renal albuminuria, given in 1 to 4-grain doses in pills.—Pr. xxvi.302 ; B.M.J. ii./79,947.

Use of a solution of this colour, between glass plates in remedying some forms of colour-blindness.—Pr. xxiv.133.

In albuminuria, gave better results than any other medicinal treatment; the albumen diminished considerably, or disappeared, while Fuchsine was given in 1-grain doses; the urine was coloured by it, and often the stools.—Pr. xxvi.40.

Employed in staining the bacillus of tubercle for microscopic examination. — B.M.J. i./82,916; B.M.J. i./82,735,786,1156; L. ii./82,183,1078,1138.

FUCUS VESICULOSUS.

Bladder Wrack.

Syn.—SEA WRACK.

Preparations of this sea-weed, being rich in iodine, bromine, and chlorine salts, have for a long time had the reputation of being useful in reducing corpulency. A liquid extract of it has of late been advertised and sold as "Anti-fat."

Preparations.

Extractum Fuci Vesiculosi.

Dose.—3 to 8 grains before meals, conveniently given in 4-grain pills, with althæa. It is exhausted by a semi-alcoholic menstruum.

Extractum Fuci Vesiculosi Liquidum.

Dose.—1 or 2 drachms before meals.

References.

Combined with liquor potassæ, reduced the fat of a lad who had suddenly become very corpulent.—Pr. xvi.312.

The extract, in 4-grain doses 3 times a day, given to lessen fat, with good results.—B.M.J. i./79,881.

Extract given with good results; does not produce dyspepsia or diarrhœa.—B.M.J. i./79,960.

Pills, 4 grains in each, three times a day, given for obesity, acted as a diuretic; did not diminish the weight. —B.M.J. ii./79,315.

An obese man was diminished.—B.M.J. ii./79,482.

A lady lost 20 lb. in 9 weeks when taking the liquid extract; and a gentleman 8 lb. in 6 weeks; another 8 lb. in 3 weeks, without bad results.—B.M.J. ii./79, 482.

GELATUM PETROLEUM.

Petroleum Jelly.

Syn.—VASELINUM, Vaseline; UNGUENTUM PARAFFINIS, Paraffin Ointment, R.O.H.

A Petroleum product, of semi-solid, unctuous consistence, translucent, and pale opal yellow in colour, obtained from the bottom of the oil-tanks and pipes of the pumps of the Pennsylvania oil-wells. It is purified from volatile products by gently simmering and filtering through animal charcoal; if repeatedly filtered through this, it becomes opal-white in appearance, and is then known as

Vaselinum Album, White Vaseline.

This is most suitable for toilet purposes.

Since first imported, about ten years ago, there have been several imitations of Vaseline produced; but it is still purer, freer from odour, is less crystalline and granular, and has less tendency to separate than any of its competitors. Among the latter are—

Adepsine, Yellow and White; melt about 120° F.; White Adepsine is of the consistence of, and resembles, lard in appearance; it is one of the best petroleum substitutes for it.

Chrisma, Cosmoline (Unguentum Petrolei), **Fossiline,** and **Ozokerine** are also found in the market as imitations of Vaseline.

Vaseline is bland, inodorous, and tasteless, unirritating to the skin, mucous membrane, and wounds or sores in any condition. It has the advantage over lard and other fats, in that it is unchangeable—cannot oxidise or become rancid, and thus set up irritation. It cannot be saponified; caustic alkalies have no action on it. Yet Vaseline and ointments made of it can easily be washed off with soap and water.

Vaseline is insoluble in water, only slightly and partially soluble in alcohol, freely soluble in ether and chloroform. When melted, it combines with oils, melted fats, and paraffin wax, oleates, and oleic acid. It readily dissolves thymol, menthol, and salicylic acid; less so chrysophanic acid, and carbolic acid about 1 in 20; the alkaloids dissolve in it in about the following proportions:—atropia, 1 in 40; morphia, 1 in 200; quinia, 1 in 80; and veratria, 1 in 80. The oleic acid solutions of these alkaloids dissolve in it in all proportions.

Lard, plain or benzoated, spermaceti ointment, and simple ointment are the four bases suggested for extemporaneous medication by the Pharmacopœia. Lard, the most used and cheapest, has for some purposes, in the summer, too low a melting point; spermaceti ointment is variable and costly; and simple ointment crumbles in winter. Being from animal and vegetable sources, these are all prone to become rancid.

Since Vaseline was introduced to the medical profession and the public into this country by the writer, this and the other inodorous forms of petroleum containing more or less paraffin wax have, in great measure, replaced the before-mentioned preparations as bases for external medication. Still, both classes of bases have their special uses. Where absorption of the medicament by the skin or tissues is required, lard or some animal fat is best adapted for the purpose, *e.g.*, for mercurial inunction, applying iodine, iodide of potassium, or other iodides, to reduce glandular enlargements, and for using aconitine, veratria, or morphia in neuralgia, or relieving pain generally. Lard is often a solvent for these medicaments, or by the intervention of oleic acid, chloroform, or spirit, they may be dissolved in lard, and thus be readily absorbed. Vaseline and its allies are often solvents also; but these petroleum bases are not readily, if at all, absorbed by the skin or tissues. After slightly smearing the hands or other parts of the body with Vaseline, they remain moist for eight hours or more. In this way, Vaseline is an excellent lubricant for the skin,—protects it from exposure, and prevents the drying, hardening, scaling, or cracking of parts likely to do so. By thus protecting and keeping the parts moist, it is very useful in many skin diseases, and for applying to the eruption of scarlet fever or measles, burns, scalds, and chapped and sunburnt skin; it prevents the formation of hard crusts, and is a good basis for many medicaments of which it is a solvent. As it melts about 95° F., it readily liquefies on whatever part of the body it is applied, and brings the affected part directly and completely in contact with the medicament held in solution; also, as it can be painted on in a thin streak, it is admirably adapted as a basis for applying medicaments, either in solution or suspension, to the eyelids, as well as to the conjunctiva and nasal passages. It is likewise well adapted for drugs which turn lard and other fats quickly rancid, such as preparations of lead, mercury, zinc, and iodide of sulphur. Still, where Vaseline, either by itself or as the basis of a medicament which does not dissolve in it, is required to be applied as an ointment spread on lint or rag, it melts so readily, that it becomes absorbed by the dressing, spreads to the surrounding parts, and leaves the medicament dry on the sore. To obviate this, a firmer basis, and one requiring a higher temperature for complete liquefaction is necessary.

In the case of lard, which melts at 110° to 115° F., we have a mixture of the proximate principles stearine and oleine; stearine when pure is solid and brittle, and oleine when pure is liquid; in lard the stearine has crystallized out of solution in the oleine, and the two mix to form a plastic, solid fat, which does not completely liquefy when applied to the surface of the body.

Similarly we require a basis of mixed inodorous solid and liquid paraffins blended by the former having crystallized out of the latter and formed a similar compound to lard. In Vaseline this blending is done by nature, the crystallization is invisible to the naked eye, it is translucent and apparently homogeneous, but its melting point is too low. The writer finds the solid paraffins with higher melting points crystallize in more minute crystals and blend best with Vaseline. He finds the following makes useful hard bases for ointments:—

Ceratum Petrolei.

Vaseline	2 parts.
Paraffin (135° to 140°) ...	1 part.

Melt and stir till cold. For complete liquefaction, this requires a temperature of about 125° F. It does not, therefore, completely liquefy on the surface of the body and is suitable as a basis for ointments to be applied spread on lint or rag, to which it adheres more firmly than to the skin, so that on removal the wound or sore is left clean and free from any adhering ointment, &c. It is a good basis for antiseptic applications, such as boracic acid (see Acidum Boracicum), carbolic acid (see Acidum Carbolicum), eucalyptus oil (see Eucalypti Folia), and salicylic acid (see Acidum Salicylicum). Impregnated with any solid medicament, and placed into a wound or on a sore, it slowly allows the former to come constantly in contact with the serous or other discharge, and thus checks any putrefaction. A little rubbed on the skin of the face or hands protects the parts more effectually than simple vaseline.

Petrolatum, Petroleum Ointment, U.S.

One having a melting point of 104° F. and another 125° F., are official.

Unguentum Petrolei, Petroleum Ointment, L.H.

Yellow Wax	30 grains.
Vaseline	1 ounce.

Melt and stir until cold.

Cremor Zinci.

Oxide of Zinc	80 grains.
Vaseline	1 ounce.
Perfume	*q.s.*

Mix. Is much superior to violet powder for nursery use.

GELSEMIUM.

Syn.—GELSEMINUM.

The root of "yellow jasmine"—*Gelsemium sempervirens*—imported from the United States, must be distinguished from the yellow jasmine cultivated here, which is a species of *Jasminum*. Gelsemium is said to have febrifuge properties, as it lowers the pulse and depresses the nervous system. It has been much used in acute and rheumatic neuralgia, and toothache. It is a powerful paralyzer and respiratory poison. Large doses contract the pupil and cause giddiness and diplopia. It contains, in combination with gelsemic acid, the alkaloid

Gelsemia, Gelsemine.

Dose.—$\frac{1}{60}$ to $\frac{1}{20}$ grain.

Is met with in commerce as a yellowish brown amorphous powder, with a bitterish taste, odourless, sparingly and slowly soluble in water, easily soluble in alcohol, ether, and dilute acids. Applied locally, it dilates the pupil of the eye. Gelsemia and its salts have lately been crystallized.—P.J. 1883,641.

Gelsemiæ Hydrochloras, Gelsemine Hydrochlorate.

Dose.—$\frac{1}{60}$ to $\frac{1}{20}$ grain.

A light brownish, almost white, granular powder, freely soluble in water.

Liquor Gelsemiæ Hydrochloratis.

Hydrochlorate of Gelsemine ...	1 grain.
Distilled Water	1 drachm.

Dose.—Hypodermically 1 to 3 minims. Useful in facial neuralgia. The solution is likewise recommended for quickly dilating the pupil previous to Ophthalmoscopic Examination. The maximum dilation occurs in 50 to 70 minutes, and, as its action is not so prolonged as that of atropia, the inconvenience of a dilated pupil more rapidly subsides.—L. i./77,832 ; B.M.J. ii./79,362.

Gelsemin.

Dose.—½ to 2 grains in a pill, with spirit and glycerine.

The powdered alcoholic extractive of a pale brown colour obtained from Gelsemium root. Must be distinguished from the alkaloid.

Pilula Gelsemin.

Gelsemin	1 grain.
Glycerine and Rectified Spirit	*q.s.*

To make one pill. Useful in neuralgia and as a hypnotic, one at bedtime.

Pilula Croton-Chloral cum Gelsemiâ.—See p. 103.

Tinctura Gelsemii.

Gelsemium Root	1 ounce.
Proof Spirit	10 ounces.

Dose.—5 to 30 minims, often given in combination with bromide of ammonium or potassium for neuralgia. The tincture has a pale brown colour and a fluorescent surface.

References.

Neuralgia, cases of, treated with good results.—L. i./73,731.

Neuralgia of face and jaws associated with carious teeth—15 minims of the tincture every 6 hours rarely fails to give relief.—Pr. xv.115.

For neuralgia 5 to 15 minims 3 times a day.—B. and F.M.C.R. lvii.474.

Physiological effects, experiments and investigations of, &c.; is an antidote to strychnia.—L. ii./75,907; L. i./76,182,24,415,489,561,661,732; L. ii./76,569; L. i./78,858,892,953.

Dilates the os uteri in the non-puerperal state.—Pr. xviii.131.

Valuable remedy for rigid os during labour.—M.R. 1879,186.

Checks the hectic of consumption.—Pr. xxiii.375.

Dilates the pupil, used locally, whilst the internal use contracts it. Used with decided success in neuralgia of the dental nerves, even when the teeth are carious.—R.

Relieves maxillary neuralgia, but leaves frontal unaffected; 20 minims of tincture for a dose, repeat in 1½ or two hours. If a third dose is required, its use is contra-indicated.—L. ii./75,660.

In neuralgia of the fifth pair of nerves 20 minims every half-hour up to three doses. Specially useful in rheumatic neuralgia of the gums.—Br. ii./79,xxiv.

Death from 2 ounces of tincture.—L. i./82,74.

Case of traumatic tetanus treated by Gelsemium with recovery.—B.M.J. ii./82,1245; B.M.J. i./83,9.

Diplopia and ptosis may be caused by large doses.—B.M.J. ii./83,323.

GINGERIN.

Dose.—½ to 1 grain, in a pill or much diluted with spirit.

In commerce this is the crude liquid oleo-resin obtained from ginger, the rhizome of *Zingiber officinale*. It has the colour and consistence of treacle, with an aromatic and very pungent taste. Is a useful addition to purgative pills as a corrective to prevent them griping.

GLYCERINUM.

Glycerine (*Off.*).

Dose.—10 minims to 2 drachms.

Preparations—Official.

Glycerinum Acidi Carbolici ...	1 to 4
Glycerinum Acidi Gallici ...	1 to 4
Glycerinum Acidi Tannici ...	1 to 4
Glycerinum Amyli (heated) ...	1 to 8
Glycerinum Boracis	1 to 4

Stronger solutions of carbolic and tannic acids are sometimes preferred. As a throat pigment, and for uterine application, that of tannic acid may be used double the above strength—1 to 2 of Glycerine. Glycerine of borax is not a mere solution, it has an acid reaction, and when mixed with an alkaline carbonate evolves carbonic acid.

Unofficial.

Boroglyceride.—See Acidum Boracicum, p. 6.

Glycerinum Belladonnæ.—See Belladonna, p. 59.

Glycerinum Bismuthi Nitratis.

Nitrate of Bismuth, in crystals ... (true nitrate.)	60 grains.
Glycerine	1 ounce.

Dissolve without heat. Used as stimulant application in eczema.—P.J. 1874,389,470,484,508.

Glycerinum cum Aquâ Rosæ.

Glycerine	2 ounces.
Rose Water, prepared with Otto	3 ounces.

Mix. An agreeable emollient for the skin.

Glycerine Jelly, for the Hands.

Gelatine	140 grains.
Rose Water	6 ounces.

Soak a few minutes, and heat in a water-bath to dissolve, add, when cool but still fluid,

White of Egg	¾ ounce.

Heat to coagulate completely, and add

Glycerine	6 ounces.
Salicylic Acid	12 grains.

Mix well, filter through a hot-water funnel, and bottle while warm. A harder jelly, for microscopic purposes, is prepared in a similar manner.

Glycerinum Hydrargyri Perchloridi.—contains ⅛ grain in 1 minim.—See p. 147.

Glycerinum Iodi.—See Iodum, p. 158.

Iodo-Glycerine Solution.—See Iodum, p. 158.

Glycerinum Olei Ricini.

Equal volumes of Castor Oil and Glycerine are emulsified by adding the oil gradually, triturating thoroughly, to the Glycerine contained in a mortar; a semi-solid compound is formed, which, when flavoured with essential oil of almond or lemon, is not nauseous, and as a purge does not lose its effect.—L. i./83,263,303; Pr. xxx., 65.

Dose.—A teaspoonful, or more.

Glycerinum Plumbi Subacetatis, R.O.H.

Syn.—Pigmentum Plumbi—Glycerole of Subacetate of Lead.—B.S.H.

Acetate of Lead	5 ounces.
Oxide of Lead, in powder ...	3½ ounces.
Glycerine	20 ounces.
Distilled Water	12 ounces.

Mix together, and boil for a quarter of an hour; then filter and evaporate to one pint. This is the same strength as Goulard's Extract—Liquor Plumbi Subacetatis, B.P., with glycerine for the solvent in place of water; it keeps much better than, and does not deposit like, the latter.—P.J. 1876,881.

This pigment is useful as an astringent and sedative in cases of chronic eczema. It should first be applied diluted 1 part with about 7 of glycerine, and the strength gradually increased; it desiccates the eruption without producing a hard crust. It may also be diluted with four parts of milk as a lotion for eczema, but this Lotion,

Lotio Plumbi cum Lacte is generally made with liquor plumbi subacetatis, 1 or 2 drachms to the ounce of milk, with a little Eau de Cologne added.—Br. ii./82,225.

The glycerole has also been found useful, in some uterine affections, applied on absorbent wool, diluted as above.

Unguentum Plumbi Subacetatis cum Petroleo.

Syn. Unguentum Plumbi Subacetatis cum Paraffino, R.O.H.

Glycerole of Subacetate of Lead	4½ ounces.
Vaseline	18 ounces.
Paraffin Wax	6 ounces.

Melt the paraffin wax and vaseline together, add the glycerole of lead, and stir till cold. This preparation is equivalent to the Goulard's cerate, unguentum plumbi subacetatis compositum, B.P. The latter is prone to become rancid, whereas the above will keep indefinitely. It is found a most useful application in chronic eczema, ulcerated legs, &c. It can be kept constantly applied on lint or rag, as it does not become absorbed by the dressing, or stick to the sore, but comes off clean on removing the lint. It is useful also in tinea tarsi.

Glycerinum Tragacanthæ.—See Tragacantha, p. 259.

Glyco-gelatine, T.H.

Refined Gelatine	1 ounce.
Glycerine (by weight)	2½ ounces.
Ammoniacal Solution of Carmine	*q.s.*
Orange Flower Water	2½ ounces.

Soak the gelatine in the water for two hours, then heat in a water-bath till dissolved, add the glycerine, and stir well together. Let the mixture cool, and when nearly cold add the carmine solution, mix till uniformly coloured, and set aside to solidify.

Glyco-gelatine affords a ready method of prescribing lozenges to meet the requirements of individual cases; one ounce of the mass will make twenty-four pastils; it is medicated by melting in a water-bath, and the medicament added; or this, if insoluble, is first rubbed with a little glycerine, and then mixed with the hot basis, and cooled by pouring into an oiled tray, and, when solidified, cut into the required number of pastils. Pastils are specially suited to cases of inflammation of the tongue or palate, and their gelatinous nature gives much relief in dryness of the throat. The following list may be kept prepared:—

Pastillus	Acidi Boracici, T.H.	gr.2
,,	Acidi Carbolici, T.H.	gr.½
,,	Aconiti Tinct.	m.i.
,,	Ammonii Chloridi, T.H.	gr.2
,,	Bismuthi Carbonatis, T.H.	gr.3
,,	Bismuthi Carbonatis, T.H. Morphiæ Acetatis	gr.3 gr.$\frac{1}{40}$
,,	Bismuthi Carbonatis, T.H. Potassæ Chloratis	gr.3 gr.2
,,	Cocæ Extracti	gr.2½
,,	Hydrargyri Perchloridi Potassæ Chloratis	gr.$\frac{1}{20}$ gr.3
,,	Iodoformi, T.H. (more or less if prescribed.)	gr.1
,,	Morphiæ Acetatis	gr.$\frac{1}{40}$
,,	Potassæ Chloratis	gr.2
,,	Thymol	gr.$\frac{1}{32}$

Mass for Pessaries.

Gelatine ... ... 1 ounce.

Immerse in four ounces of water for a few seconds, drain, and in half an hour add

Glycerine ... ... 4 ounces.

Dissolve in a water-bath. Should weigh six ounces.

GLYCYRRHIZA.

Liquorice (*Off.*).

Dose of root, in powder.—5 to 20 grains or more.

Preparations.

Extractum Glycyrrhizæ (*Off.*).

Dose.—5 grains to 1 drachm.

Extractum Glycyrrhizæ Liquidum (*Off.*).

A fluid formed of the above contains ⅛ of its volume of rectified spirit.

Dose.—20 minims to 1 drachm.

Glycyrrhizinum Ammoniatum.—Ammoniated Glycyrrhizin, U.S.

Dose.—½ to 5 grains, or more.

Glycyrrhizin, the sweet principle of liquorice, is precipitated, from solution in water, by acids. It is contained in the root as an ammoniacal compound. The medicinal Ammoniated Glycyrrhizin is obtained from the root by exhausting with water, boiling the solution to coagulate albumen, precipitating with sulphuric or hydrochloric acid; the precipitate is collected, well washed, and redissolved in ammonia water, the solution filtered, evaporated, and dried on glass plates. It forms garnet-coloured, shining scales like tartarated iron, and possesses the persistent sweet taste of liquorice. A grain will flavour 6 ounces of water.—P.J. 1875,53.

The before-mentioned preparations of liquorice are useful for covering the taste of nauseous drugs given in a liquid form, such as chloride of ammonium, sulphate of magnesia, sulphate of quinine, ipecacuanha, and aloes. In tincture of aloes, liquorice effectually disguises the bitter taste; it is also added, for the same purpose, to Mistura Sennæ Composita, Decoctum Aloes Compositum, Confectio Sennæ, and as a demulcent is used in Infusum Lini.

In addition to the official extracts, dried extracts are largely imported from Italy and Spain, known as Liquorice Juice or Spanish Liquorice, that bearing the stamp of Solazzi being most prized. There are also prepared in England, Liquorice Lozenges, known as Pontefract Cakes, and the same substance in sticks about the thickness of a quill known as Pipe Liquorice.

Pulvis Glycyrrhizæ Compositus (*Off.*).

Senna, in fine powder ...	2 ounces.
Liquorice Root, in fine powder	2 ounces.
Refined Sugar, in powder ...	6 ounces.

Dose.—30 to 60 grains as a laxative.

This preparation owes its activity to the senna it contains. The corresponding preparation of the German Pharmacopœia, containing in addition sulphur and fennel, is much more frequently ordered under the above name. It is now called officially

Pulvis Liquiritiæ Compositus, P.G.

Syn.—PULVIS PECTORALIS (*Kurellæ*).

Senna, in powder	
Liquorice, in powder, of each... ...	2
Fennel, in powder	1
Washed Sulphur	1
White Sugar, in powder	6

Mix. *Dose.*—10 grains to a drachm or more, mixed with water or milk, taken early in the morning, is a mild and agreeable laxative. For constipation and hepatic disease, it is pleasant to take, and effectual without catharsis.—Pr. viii.276.

GOKHRU.

Syn.—GOKEROO (*Hindi*).

The fruit of *Pedalium Murex*. It is employed in India as a remedy for nocturnal seminal emissions, incontinence of urine and impotence.—Pr. xvii.381.

The capsule is very prickly, and both it and the seeds are rich in mucilaginous matter.

Infusum Gokhru.

Gokhru Fruit...	1 ounce.
Boiling Distilled Water ...	1 pint.

Macerate 2 hours and strain, pouring over the contents of the strainer water *q.s.* to produce 1 pint, which forms a daily dose, and should be freshly prepared.

GOSSYPIUM.

Cotton Wool.

Beside **Pyroxylin,** Gun Cotton (*Off.*)—the following unofficial preparations of cotton are in use:—

Gossypium Absorbens, now much employed as a wound-dressing, is prepared by alternately treating bleached cotton with diluted hydrochloric acid and solution of soda and well washing afterwards. A sheet of this wool between layers of gauze is sold as **Absorbent Gauze and Cotton Wool Tissue**; the same made into **Balls** is recommended for surgical use in place of sponges.—L. i./83,1003.

Gossypium Acidi Carbolici.—See p. 9.

Gossypium Acidi Salicylici, 4 per cent.—See Acidum Salicylicum, p. 28.

Gossypium Camphoræ Salicylatæ, 8 per cent. See Camphora Salicylata, p. 72.

Gossypium Iodoformi, 4, 10, and 50 per cent.—See Iodoform, p. 155.

In T.H. the following are recommended for aural affections:—Gossypium Acidi Boracici, containing 50 per cent.; Gossypium Acidi Tannici, 33 per cent.; Gossypium Aluminis, 30 per cent.; Gossypium Camphoræ, 33 per cent.; Gossypium Cubebæ; Gossypium Ferri Perchloridi; Gossypium Hamamelidis; Gossypium Iodi; Gossypium Iodoformi, 50 per cent.; Gossypium Krameriæ; Gossypium Opii.

Tinctura Gossypii Radicis (Squire).

Dried bark of root of cotton plant 1, proof spirit 4.

Dose.—1 drachm 3 times a day as an emmenagogue and parturient.

GRINDELIA.

Gum Plant.

The dried herbs *Grindelia robusta* and *G. squarrosa*—the latter is most commonly used—form the Californian remedy for asthma. In America, this drug has been found very useful in reducing the frequency and violence of the spasmodic attacks which occur in asthma, whooping-cough, and bronchitis.

The involucre, and often the leaves, are coated with a glutinous oleo-resin.

Extractum Grindeliæ.

Obtained by exhausting the drug with alcohol, and distilling off the spirit.

Dose.—2 to 3 grains in a pill with lycopodium, three times a day.—R.

Extractum Grindeliæ Fluidum.

Prepared by exhausting the drug with rectified spirit, so that a fluid ounce represents an ounce of the drug.

Dose.—10 to 30 minims at the onset of a paroxysm of asthma, and repeated every half-hour or hour, in sweetened water or milk else the resin separates and sticks to the vessel. Useful for whooping-cough, 10 minims every 2 hours.—P.J. 1878,582.

Useful in whooping-cough and bronchitis, and of singular efficacy in asthma. We have been informed of several cases occurring in aged persons, in which half a teaspoonful of the fluid extract afforded almost instantaneous relief.—Stillé and Maisch.

The fluid extract is also applied topically in America as a remedy for the poisoning of *Rhus toxicodendron*.

GUARANA.

Guarana.

Dose.—10 to 60 grains in powder, or infused in a cup of boiling water.

The seeds of *Paullinia sorbilis*, roasted and moistened with water, made into a hard paste, and rolled into cylinders, and dried. Imported from Brazil. The drug contains about 5 per cent. of a crystalline principle, **Guaranine**, which is identical with caffeine, together with tannin, gum, &c. Guarana has been recommended particularly for sick-headache. Guaranine may be taken as caffeine. *Dose.*—½ to 5 grains, or more.

Elixir Guaranæ.

Tincture of Guarana and Simple Elixir in equal quantities, diluted with water, forms an agreeable draught.

Dose.—One drachm.

Tinctura Guaranæ. *Dose.*—½ to 1 drachm.

Macerate Guarana 1 ounce, in proof spirit, *q.s.* to produce 4 ounces.

Useful in sick-headache.—B.M.J. i./72,421.

Contains double as much caffeine as tea, and five times as much as coffee; is a nervine tonic.—L. ii./70,581.

For sick-headache, 30 to 60 grains is a certain remedy. Useful also in diarrhœa and dysentery.—L. ii./72,313,507.

HAMAMELIS.

Witch Hazel.

The bark of *Hamamelis Virginica*, Witch Hazel, or Winter Bloom, imported from the United States of America. Possesses powerful astringent properties for checking hæmorrhages and excessive mucous discharges, yet its properties are not due to tannin (of which it only contains traces) or gallic acid. It forms the basis of the American nostrums—Pond's Extract, and Hazeline.

Hamamelin. *Syn.*—Hamamelidin.

Dose.—½ to 2 grains in a pill, with mucilage of acacia. It is the powdered extractive from the above of a purplish-brown colour. One grain in a suppository, with cocoa butter, is useful in curing piles.

Tinctura Hamamelidis.

Witch Hazel Bark	1 ounce.
Proof Spirit	10 ounces.

Dose.—2 to 5 minims or more.

A tincture imported from America is generally prepared with a slightly stronger spirit.

A valuable hæmostatic, very serviceable in hæmoptysis, hæmorrhoids, menorrhagia, in fact in all passive hæmorrhage, and what is known as the hæmorrhagic diathesis. As an injection for bleeding piles, 1 drachm of the tincture in 3 ounces of cold water should be given as an enema, and retained, at bedtime or before breakfast, every day; or the following ointment applied locally.—R.

A dose of tincture should be given 3 times a day by the mouth. Useful in threatened miscarriage.—Stillé and Maisch.

A lotion of 1 or 2 drachms with water to an ounce, is a useful application to bruises and small wounds.

Unguentum Hamamelidis.

Tincture of Hamamelis ...	1 drachm.
Simple Ointment	10 drachms.

Mix for use as an ointment for piles.

Witch Hazel plasters are also made in rubber combination for covering varicose veins.

Letters on its uses and chemical constituents.—L. ii./79,303,337,486.

Useful in piles as a lotion 3 or 4 times a day, and a piece of lint dipped in the Hazeline applied to the anus during the intervals.—B.M.J. i./81,965.

HYDRARGYRUM.

Hydrargyri Oleatum.—See p. 189.

Hydrargyri Perchloridum (*Off.*); **Hydrargyri Chloridum Corrosivum, U.S.**; Corrosive Sublimate.

Dose.—$\frac{1}{16}$ or less, to $\frac{1}{8}$, increased to $\frac{1}{4}$ grain.

The officinal preparations are Lotio Hydrargyri Flava (18 grains to lime water 10 ounces), and Liquor Hydrargyri Perchloridi, which has Perchloride of Mercury and Chloride of Ammonium of each 1 grain in 2 ounces.*

The researches of Koch and others having proved this corrosive poison to be the most powerful antiseptic, solutions of it have of late been much used as surgical dressings; it is soluble 1 in 16 of water, 1 in 4 rectified spirit, 2 in 3 of glycerine (by weight). A solution 1 in 1,000 of water, or preferably an equivalent quantity of the **Glycerine Solution** 2 in 3, one drachm (fluid) to 4 pints, is recommended as a lotion. As dressings, lint, absorbent wool, gauze, or wood wool (*see* p. 266) may be impregnated with ½ per cent. of each, corrosive sublimate and glycerine.—L. i./84,346; B.M.J. i./84,364.

For eye lotion, 1 grain in 8 ounces.—R.O.H.

For gonorrhœa and gleet, 1 to 2 gr. in 8 ounces recommended.—Edin.Med.Jour. 1884,756; M.P.C. i./84,194.

For ear discharges, syringing with 1 in 10,000 is antiseptic.—Edin.Med.Jour. 1884,665. This solution is recommended as a pigment in diphtheria.—M.P.C. i./84,340.

Hydrargyri Tannas, Tannate of Mercury; Mercurous Tannate.

Dose.—1½ gr. in a pill with syrup and tragacanth.

This new remedy for syphilis introduced by Lustgarten of Vienna is in dark green, odourless and tasteless bleaching ladies' hair to the fashionable colour), has a harsh, bitter taste, is odourless, or nearly so. It has the second atom of oxygen in a very loose state of combination. It readily decomposes, especially in contact with a metallic oxide, such as that of silver or manganese, these if moist, and freshly precipitated, cause oxygen to be briskly evolved from it. Ether restrains this decomposition, and this fact is made use of for the production of

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* The writer has shown this is not a mere solution of the Perchloride; a double salt is formed, ammonio-mercuric chloride or *Sal Alembroth*, with an excess of chloride of ammonium present. The solution, if prepared with common water (containing carbonate of lime) in place of distilled, or if even diluted with common water, lets fall a white precipitate,—if diluted much scarcely a trace of mercury is left in solution. It is better to use a simple solution of the Perchloride of the same strength, in common or distilled water it forms a stable solution.—P.J. 1870.544.

Ozonic Ether.

Dose.—½ to 1 drachm.

Ether containing in solution peroxide of hydrogen of 30-volume strength with some alcohol. It is miscible with water, possesses properties similar to the above, and is more stable. In conjunction with tincture of guaiacum, it is employed as a test for blood; it changes the colour of the blood to blue; but gluten, casein, &c., do the same. Peroxide of Hydrogen, and Ozonic Ether have been given internally for diabetes and whooping-cough, and Ozonic Ether used locally for scarlet fever.

Statement of the chemistry and properties of Peroxide of Hydrogen, advises its trial in diabetes and fever, as an antidote to the alkaloids and as an application to foul sores. —L. ii./60,390.

Of great value as a deodoriser.—M.T.G. ii./75,449.

Promotes glandular secretion, useful in diabetes and dyspnœa; suggests trial in epilepsy.—M.T.G. i./71,162.

Lecture suggesting its medical uses in diabetes, rheumatism, cardiac disease, and struma.—M.T.G. ii./68,661.

Its use in albuminuria following scarlatina, pregnancy, and pneumonia.—B.M.J. i./81,575.

Ozonic Ether, in half-drachm doses, 3 times a day, cured cases of diabetes; it oxidises the sugar.—L. i./68, 45; L. ii./68,526; M.T.G. ii./68,680.

For purulent discharges, is a local astringent and antiseptic, colourless, odourless, painless, does not stain and is not poisonous.—Pr. xxxii.196.

Ozonic Ether 4 drachms, lard 4 ounces, benzoic acid 20 grains, otto of roses 4 drops, mix without heat; used for inunction over the whole surface of the body 3 times a day for about 3 weeks, with success to prevent spreading of scarlet fever in a number of cases, and ½ an ounce of the ether to a pint of water, used as a gargle or given as a mixture in frequent doses.—M.T.G. i./77,256.

HYDROQUINONE.

Syn.—HYDROCHINON (German).

Dose:—?

An isomeride of Resorcin and Pyrocatechin. May be prepared from quinic acid by dry distillation, but is principally obtained as a derivative of coal tar. It is neutral, inodorous, has a sweetish taste, soluble 1 in 20 of water, soluble also in alcohol and ether, and slightly so in olive oil. It possesses stronger antiseptic and antipyretic properties than Resorcin. Gramme doses cause symptoms of excitement like Resorcin. It causes no local irritation injected hypodermically, is particularly suitable as an antiseptic in eye operations, useful also in infectious parasitic corneal ulcers, lessens the secretions, dose not irritate the conjunctiva or cornea, and has a certain antiseptic action on the diphtheritic process. Like carbolic acid as an antifermentative, and boracic acid in the little irritation it causes.—L. i./82,78.

HYOSCYAMIA.

Hyoscyamine.

Dose.—$\frac{1}{120}$ to $\frac{1}{40}$ grain, in cases of mania increased to $\frac{1}{16}$ or $\frac{1}{8}$ grain or more, dissolved in water by means of diluted sulphuric acid, or in a pill.

The pure alkaloid is in snow-white masses of minute crystals, without odour, soluble 1 in 120 of water, freely soluble in spirit, and is alkaline to test-papers; but the author found in this respect it has less than half the neutralising power of Atropine. According to Ladenburg, Hyoscyamine is identical with "light atropine" and "light daturine" (see Atropine) as well as Duboisine. He also finds that Hyoscyamus contains another alkaloid, Hyoscine. As a mydriatic, it acts like atropine, but with greater intensity, while the duration of effect is about equal (P.J. 1876, 471). It is an expensive alkaloid. In addition to the crystallized alkaloid, there is in commerce

Hyoscyamine Amorphous, or Uncrystallized Hyoscyamine.

Dose.—$\frac{1}{16}$ to $\frac{1}{8}$ grain, increased, given in acute mania.

A dark brown extract-like preparation, having a strong, disagreeable odour. It is much less costly than the crystals, and the dose should be about the same.

Hyoscyamiæ Sulphas, Hyoscyamine Sulphate, U.S.

Dose.—$\frac{1}{120}$ to $\frac{1}{40}$ grain, increased.

In white or whitish slightly deliquescent small crystals, freely soluble in water.

Injectio Hyoscyamiæ Hypodermica.

Sulphate of Hyoscyamine ...	1 grain.
Distilled Water	2 drachms.

Dose.—1 to 4 minims.

Relieves pain of neuralgia, has cured mercurial tremor, senile trembling, and paralysis agitans.—M.T.G. ii./72, 605.

Violence in mania is controlled by 1-grain doses of the Amorphous Hyoscyamine.—Pr. xvii.7.

In chorea $\frac{1}{40}$ grain, increased to $\frac{1}{8}$, of the amorphous alkaloid, given twice a day, is effective in chronic cases.—Pr. xvii.291.

In acute mania, 1 grain of crystallized alkaloid produced sleep.—Pr. xviii.166.

In acute mania, a solution of the amorphous alkaloid, half a grain in an ounce, was used, and $\frac{1}{8}$ to $\frac{3}{8}$ grain, with dose increased, was given, well diluted with water, with good result.—Pr. xx.85.

In paralysis agitans, puerperal mania, delirium tremens, crystallized alkaloid is given in $\frac{1}{30}$-grain doses.—Pr. xxvi.124.

Resemblance to atropine in action. $\frac{1}{120}$ to $\frac{1}{40}$ grain injected hypodermically.—L. ii./76,319.

Crystallized alkaloid in dose of $\frac{1}{40}$ grain injected hypodermically produced delirium in patient addicted to morphia injections.—L. i./79,474.

In most cases of mania the amorphous alkaloid is a "chemical restraint," produces sleep in acute mania, diminishes number of attacks in epileptic mania, mind becomes clear in delusional insanity, and in chronic dementia the patient improves under small doses. Dose, $\frac{1}{16}$ to $\frac{1}{4}$ grain of the amorphous alkaloid.—L. ii./79,462, 502,540.

Use as a hypnotic and antispasmodic. Distinct effects from $\frac{1}{100}$-grain doses. Dose recommended of the amorphous alkaloid $\frac{1}{20}$ to 1 grain, of crystals $\frac{1}{100}$ to $\frac{1}{25}$ grain.—B.M.J. i./80,629; M.R. 1880,314.

Amorphous or Extractive Hyoscyamine is useful in maniacal excitement in dose of $\frac{1}{5}$ grain, increased, if necessary, to 1 grain. Sends the patient to sleep in half an hour or less.—Pr. xxvii.367.

When used hypodermically, is most valuable in calming the violence of a furious maniac, or a noisy, general paralytic.—B.M.J. ii./82,1031; B.M.J. i./83,9.

INGLUVIN.

Dose.—5 to 10 grains.

A special American preparation, said to be prepared from the gizzard of the domestic fowl, *Pullus Gallinaceus.* Recommended as a substitute for pepsin, and for the cure of obstinate vomiting, especially the vomiting of pregnancy.

Experiments showing that Ingluvin had little or no digestive action on coagulated egg-albumen.—Pr. xxiv.192.

IODOFORMUM.

Iodoform.

Dose.—½ to three grains or more gradually increased.

Prepared by the action of iodine on a hot solution of carbonate of soda or potash in diluted alcohol. It is in shining yellow hexagonal crystalline scales, having a persistent disagreeable odour resembling that of saffron. Soluble 1 in 8 of absolute ether, 1 in 10 of ether (Sp. Gr. 0·735), 1 in 12 of chloroform, 1 in 80 of rectified spirit, 1 in 14 of oil of eucalyptus, 1 in 10 of collodion, 1 in 60 of vaseline and oil of almonds, and about the same in fats and other fixed oils. It is insoluble in water.

Iodoformi Pulvis, as sold, is in reality in very minute crystals. It is preferred for surgical purposes, as it does not clot, but can be dredged on the diseased part.

Iodoformum Præcipitatum, or precipitated Iodoform, is a primrose yellow coloured impalpable powder. It has a slight tendency to form clots. It is used for dusting on sores.

Iodoform possesses powerful antiseptic as well as slight anæsthetic or sedative properties. It is most poisonous to the virus of syphilis and gonorrhœa, and, although it contains nine-tenths of its weight of pure iodine, it is not an irritant, like the latter, either taken by the stomach or applied topically. It is largely employed as a general antiseptic in various forms of dressings. Several modes have been suggested of covering its characteristic odour when used for this purpose, such as mixing it with balsam of Peru, oil of eucalyptus, carbolic acid, oil of peppermint, Sanitas oil, otto of rose, tannic acid, coumarin and Tonquin bean; the two last perfume it, and balsam of Peru covers it, but not effectively.

Iodoformum Aromaticum is scented with Coumarin, 1 in 50.

When used for chancres it is best applied in ethereal solution, or iodoform powder dusted on and covered with boracic acid ointment or gold-beaters' skin or painted over with flexible collodion.

It is decomposed when taken internally and iodine is soon found in the urine; not being an irritant like iodine, it has been given with good effect when the latter is indicated, and has been of service in cases of irritation of the brain and spinal cord.—Binz.

Preparations.

Buginarium Iodoformi, T.H.

Nasal bougies having a gelato-glycerine basis and containing ⅛ to ½ a grain of Iodoform in each. As they gradually dissolve, the action of the Iodoform is sustained.

Collodium cum Iodoformo.

Iodoform	5 grains.
Flexible Collodion	1 drachm.

Dissolve. Used as a pigment to venereal sores.

Insufflatio Iodoformi, T.H.

Iodoform, in fine powder ...	1 grain.
Starch, in fine powder ...	½ grain.

In specific affections of the throat, antiseptic and mildly caustic.

Iodoform and Eucalyptus Bougies, Cereolus Iodoformi et Eucalypti.

Iodoform, precipitated ...	5 grains.
Oil of Eucalyptus	10 minims.
Oil of Theobroma	35 grains.

To make one bougie 4 in. long. Used to arrest gonorrhœa.

Directions for Use.—Having dipped the bougie in oil, preferably a mixture of equal parts of eucalyptus and castor oil, or carbolic oil (1 in 20), the patient, after emptying his bladder, is laid on his back, and the bougie introduced into the urethra and forced up, if possible, about an inch beyond the meatus, with a pencil, probe, or catheter. To absorb the discharge, a pad of boracic lint is applied over the orifice and retained in position, if the patient is able, by drawing the foreskin over it; outside, a large piece of gutta-percha tissue with a strap of isinglass plaster, is used to keep the whole *in situ*, as long as the patient can—5 or 6 hours. A little absorbent wool, lint, or a handkerchief should be placed to catch any discharge escaping. On removal of the pad, two syringefuls of sulphocarbolate of zinc solution (2 grs. in 1 oz.) are injected, and if the case is very acute another bougie is introduced. Afterwards the sulphocarbolate injection should be used six or seven times a day, for three or four days. When the acute symptoms have subsided, any remaining discharge may be treated by injections of sulphate or acetate of zinc, or tannic acid. The rapidity of the cure is much aided by administering a purge first, keeping the bowels open by salines, giving from the beginning santal oil or copaiba, and the patient during the treatment avoiding alcoholic liquors. The bougies may be used at any stage of the disease, but are most serviceable in the acute stage (say) up to the eighth day. The inflammatory symptoms rapidly subside, and even in the few cases in which they fail to produce this effect they do no harm.—See "The Abortive Treatment of Gonorrhœa" in B.M.J. ii./80,124; L. ii./82,175,213.

As the bougies melt at a low temperature they should be kept cool, and if necessary handled with wet lint or rag.

Iodoform Wool, 10 per cent., **Gossypium Iodoformi.**

Absorbent cotton wool is soaked in an ethereal solution of Iodoform so as to contain, when dry, 10 per cent. of the drug. It is much used as an antiseptic dressing to wounds, and has to some extent displaced carbolic gauze. A weaker preparation containing 4 per cent. of Iodoform has been made, but has not been found sufficiently antiseptic.

Gossypium Iodoformi, T.H.

Contains 50 per cent. of Iodoform. It is used as a stimulant and antiseptic for affections of the ear.

Pastillus Iodoformi, T.H.

Contains 1 grain of Iodoform (more or less if prescribed) with 18 grains of glyco-gelatine in each pastil. Useful in syphilitic eruptions of the tongue, mouth, and throat, and in chronic pharyngitis.—M.T.G. ii./78,626.

Pilula Iodoformi, T.H.

Iodoform	2 grains.
Sugar of Milk	1 grain.
Glycerine of Tragacanth	*q.s.*

To make one pill. Dose.—1, two or three times a day.

Suppositorium Iodoformi.

Iodoform, precipitated	5 grains. (more or less if ordered).
Oil of Theobroma	*q.s.*

To make one suppository. May also be used as a pessary.

Unguentum Iodoformi.

This is made of the various strengths of 1 to 4, or as weak as 1 in 100, with a basis of petroleum cerate, vaseline or lard; if not stronger than 1 in 60, it will be in solution if gently warmed. **Unguentum Iodoformi,** U.S.—is Iodoform 10, benzoated lard 90.

Unguentum Iodoformi et Eucalypti.

Iodoform	60 grains.
Oil of Eucalyptus	1 ounce.

Heat gently till dissolved and add to

Paraffin	2½ ounces.
Vaseline	2½ ounces.

Melted together. Stir till cold.

Iodo-Vaseline is the same as the above, only all vaseline in place of 2½ ounces of paraffin.—B.M.J. ii./82,904.

Unguentum Iodoformi Rosatum (L. Browne).

Iodoform	5 grains.
Otto of Rose	3 drops.
Vaseline	1 ounce.

Dissolve and stir till cold. In nasal affections is useful in all forms of perverted secretion.

References.

For granular eyelids, Iodoform 1 to 4 of vaseline, recommended as an ointment.—M.T.G. ii./78,193.

Editorial on its therapeutic uses, recommending collodion solution for enlarged glands, and as a local anæsthetic and dressing for ulcers.—M.T.G. ii./78,629.

In later forms of syphilis and naso-pharyngeal affections, dose 1 to 2 grains internally and externally for venereal sores and indolent ulcers where there is no active inflammation.—L. i./79,83.

Résumé of its uses, recommended as an inhalation for phthisis and for application to cancer uteri et recti. —L. i./79,105.

In phlyctenular ophthalmia and ciliary blepharitis an ointment of 1 in 12 of lard was useful.—L. ii./79,953.

External application of Iodoform to front of the chest lowers the temperature in phthisis.—B.M.J. i./79,937.

Balsam of Peru, 2 parts to 1 of Iodoform completely masks the disagreeable odour of the latter. An ointment recommended of Iodoform 1, balsam 2, vaseline or lard 8, in various cutaneous diseases. Iodoform ointment used in orchitis, enlarged glands, and venereal ulcers. —B.M.J. ii./79,498.

All chancres are best treated with Iodoform. Sprinkle a little on the wound and cover with lint and vaseline.—Br. ii./79,lx.; Pr. xxii.321.

In nasal catarrh used as snuff *per se* with success.—B.M.J. i./80,167.

Ulcers treated by dusting it on and covering with boracic acid ointment.—B.M.J. i./80,362,400.

Alveolar abscesses treated by iodoform in conjunction with oil of eucalyptus.—B.M.J. i./80,621.

In impetigo larvalis, sores moistened with glycerine and equal parts of Iodoform and starch at first, then pure iodoform dusted on, in many cases quickly healed.—B.M.J. i./81,767.

On the frog's heart Iodoform acts like chloroform, but much more powerfully, arresting the ventricle; this can be restored by ammonia, which is antagonistic to Iodoform and chloroform.—Pr. xxvii.20.

Ulcer of the stomach treated by a 3 grain pill of Iodoform 3 times a day, blistering and nutrient enemata, vomiting ceased and rapid improvement resulted.—B.M.J. i./82,657.

Soft sores treated by painting with ethereal solution of Iodoform and then covered with a film of collodion or gold-beater's skin.—B.M.J. i./82,340.

Report of 4 surgical cases under Iodoform dressings, results not satisfactory.—B.M.J. i./82,903.

Use and dangers of Iodoform dressings.—M.R. 1882,405.

IODUM.

Iodine (*Off.*).

The official preparations containing free Iodine are Linimentum Iodi 1 in 8, Liquor Iodi (Lugol's solution) 1 in 24, Tinctura Iodi 1 in 40, Unguentum Iodi 1 in 31, Vapor Iodi, volumetric solution of Iodine, 127 in 10,000.

Preparations (non-official).

Carbolised Iodine Solution.—See Acidum Carbolicum, p. 9.

Collodium Iodi.—See p. 96.

Glycerinum Iodi.

Iodine	20 grains.
Glycerine	1 ounce.

Heat carefully till dissolved,—is not a mere solution, some decomposition of glycerine takes place. It forms a useful pigment, the skin does not get hardened by its repeated application, and does not peel off.—P.J. 1870,601.

Iodized Phenol.—See Acidum Carbolicum, p. 9.

Injectio Iodi Hypodermica Fortissima, T.H.

Iodine	360 grains.
Iodide of Potassium ...	360 grains.
Distilled Water	4½ drachms.

Dissolve. Should measure exactly 1 ounce and contain ¾ grain free Iodine in each minim.

Dose.—3 to 5 minims for fibrous bronchocele.—Birm. Med. Rev. iv.1875,56.

A grain of Iodine may be held in solution in a minim of fluid, by employing iodide of sodium in the proportion of Iodine 3, iodide of sodium 2, and water *q.s.* to form 3 volumes.

Iodo-Glycerine Solution.

Iodine	10 grains.
Iodide of Potassium ...	30 grains.
Glycerine	1 ounce.

Dissolve. In spina bifida about 30 minims are injected into the tumour.—L. i./76,776; L. i./77,684; L. i./82,737; B.M.J. i./82,661; L. ii./83,499.

Pigmentum Iodi et Olei Picis, U.C.H.
(Coster's Paste).

Iodine	120 grains.
Light Oil of Wood Tar ...	1 ounce.

Mix carefully, applying heat if necessary; after ebullition preserve for use. Ebullition generally takes place by the chemical action between the two ingredients, a part of the oil is oxidised and forms a resinous deposit. Hydriodic acid is probably formed to some extent, as the mixture fails to give any reaction of free Iodine.—M.T.G. i./67,34; B.M.J. i./80,192; L. i./80,55.

Coster's Paste is a useful application for ringworm of the scalp; after well shaking the bottle, it should be well brushed in with a stiff brush; a scab will be produced which should be removed in a few days, the part cleansed by soaking with oil, and then soap and warm water; after drying, more paste should be applied. It causes no pain.

Use in the treatment of ringworm.—L. i./80,55; B.M.J. i./80,114, and Alder Smith on Ringworm.

Tinctura Iodi Decolorata.

Iodine	600 grains.
Rectified Spirit	13 ounces.

Dissolve and add

Strong Solution of Ammonia	3 ounces.

In the course of a few days, especially if exposed to sunlight, the mixture becomes decolorised. Then take

Solution, as above	1 ounce.
Rectified Spirit	2 ounces.

Mix. Thus diluted, it is about the same strength as the official tincture, and forms a useful application for chilblains and painting on exposed affected parts. Some iodoform is formed in solution.—P.J. 1876,42.

Amyli Iodidum (Buchanan).

Syn.—Amylum Iodatum; Iodized Starch, U.S.

Iodine	24 grains.
Distilled Water	*q.s.* to moisten.

Triturate and add gradually

Starch in powder	1 troy ounce.

Continue the trituration until it assumes a deep and uniform colour, and dry under 104° F.

Dose.—½ to 4 drachms, in water, water gruel, or arrowroot with water.

This is a mild form of administering Iodine in very weak combination for syphilis and other diseases, the dose is pushed until free Iodine can be detected in the urine. It is recommended as an antidote when poison is unknown, *e.g.* for sulphuretted hydrogen, the alkaloids, alkaline sulphides, caustic alkalies, and ammonia.—Pr. xxvi.128.

In lupus erythematodes, doses of 1 to 4 teaspoonfuls three times a day very successful.—B.M.J. i./80,652.

Pasta Iodi et Amyli, U.C.H.

Starch in powder	1 ounce.
Glycerine	2 ounces.
Water	6 ounces.

Boil together, and when nearly cold add

Solution of Iodine (*Off.*) ...	1 ounce.

Mix well. In devising this formula the author found the addition of glycerine was necessary to prevent the paste turning mouldy. Useful to cleanse and heal foul sores, especially such as are syphilitic.—Tilbury Fox.

It rapidly heals syphilitic ulcers, especially those of the face; if applied on lint during the night, the sores may be hidden with calamine lotion during the day.

Vapor Iodi Ætherealis.

Iodine	3 grains.
Ether	2 drachms.
Carbolic Acid	2 drachms.
Creasote	1 drachm.
Rectified Spirit	3 drachms.

Ten minims to be dropped on the respirator for dry inhalation. Thymol may be substituted for creasote.—B.M.J. i./81,841.

IRIDIN.

Syn.—IRISIN.

Dose.—1 to 5 grains, in a pill with glycerine of tragacanth or extract of henbane.

The powdered extractive of a dark brown colour obtained from the root of the blue flag, *Iris versicolor*, has a bitter, nauseous, acrid taste, possesses cathartic, alterative and diuretic properties, given in hepatic and intestinal disorders. Malarial jaundice has been cured by it.—B.

Pilula Iridin.

Iridin	2 grains.
Extract of Henbane ...	*q.s.*

To make one pill. Two for a dose at bedtime quickly remove slight feeling of biliousness, especially when the tongue is yellow; should be followed by a saline aperient in the morning. Iridin is gentler in action than podophyllin and more reliable when a slight cholagogue is wanted for a lengthened period.—Pr. xxiii.335; B.M.J. i./79,177.

On dog acts as a powerful hepatic and intestinal stimulant.—B.M.J. Rep. 1878,66.

Comfortable purge for biliousness, 4 grains combined with one grain of euonymin.—B.M.J. i./79,932.

Mild aperient cholagogue, produces bilious stools, does not irritate rectum, and has no subsequent astringency.—L. ii./62,239.

In gallstones, 1 grain every night for twelve nights removes liability to.—B.M.J. ii./81,694.

In vomiting of pregnancy 2 grain doses at bedtime followed by a saline purge.—M.T.G. i./84,539.

JABORANDI.

Dose.—5 to 60 grains of the powder.

The dried leaves of a rutaceous shrub, a species of *Pilocarpus,* probably *P. pennatifolius* imported from Brazil, principally from Pernambuco. The leaves of *P. Selloanus* are also imported from Rio de Janeiro under the same name, but are much less active. Jaborandi was first introduced into Britain by the writer in 1874. The leaves are of a dull green colour, large, pinnate, having 3 to 5 pairs of leaflets and a terminal one. The leaflets are coriaceous, 4 to 6 inches long, oblong, lanceolate, emarginate, smooth, or only slightly tomentose and full of pellucid dots. The leaves of several species of *Piper* also are known in Brazil as Jaborandi, which should not be confounded with the *Pilocarpus* variety. The *Piper* leaves are brighter green in colour, more papyraceous, and they are not pinnate. The latter have been imported and sold in the London market as Jaborandi. They are said to possess similar therapeutic properties, but have not been carefully investigated. The true Jaborandi is a powerful sudorific and sialogogue; after a time a large dose acts as an emetic, contracts the pupil of the eye, and causes the approximation of vision. These properties are due to an alkaloid **Pilocarpine** contained in it. A second alkaloid Jaborine, which is said to have antagonistic properties to pilocarpine, is probably a derivative from it. Pure Pilocarpine is a colourless, syrupy, liquid, odourless alkaloid, which forms crystallizable salts with acids (see Pilocarpia). Jaborine is more liquid, and does not form crystallizable salts. Possessing such marked physiological properties, this drug has been used in a great variety of diseases, most successfully in asthma, diabetes, and as an antidote to belladonna poisoning. Children proportionately are not affected by the drug so much as adults. Description and physiological action (on the author).—P.J. 1874,364; and 1875,561; L. i./75,138; B.M.J. i./75,142; M.T.G. i./75,92.

Description and botanical source.—P.J. 1875,581,641.

Extractum Jaborandi.

Dose.—2 to 10 grains, in pills with lycopodium, 1 = 6 parts of leaves. It is a soft alcoholic extract.

Extractum Jaborandi Fluidum, Liquor Jaborandi.

Dose.—10 to 60 minims. It is an aqueous fluid extract with spirit *q.s.* to keep it. A fluid drachm = 1 drachm of leaves, is more palatable than the tincture.

Infusum Jaborandi.

One ounce to a pint of boiling water.

Dose.—1 to 2 ounces as a diaphoretic.

Tinctura Jaborandi.

Dose.—10 to 60 minims. Two fluid drachms = 1 drachm of leaves, obtained by percolation; 5 to 20 minims 3 times a day, or at bedtime only, check night sweating.—Pr. xxiii.430.

References.

Physiological action on submaxillary gland of dog.—Jour. Anat. and Phys. ix.173; x.187.

Physiological and therapeutical action.—L. i./75,157; B.M.J. i./75,543.

Diabetes insipidus, 2 cases relieved by Jaborandi. — L. ii./75,242.

Case of diabetes treated unsuccessfully by.—L, ii./75,775.

Puerperal albuminuria and convulsions, its effects on. —L. i./79,464.

Is only a feeble hepatic stimulant on dog.—B.M.J. i./79,137,177.

Tension of accommodation, increase of lachrymal secretion and glistening scotomata caused by taking infusion of.—Pr. xxii.458.

Therapeutic study of its uses and properties.—B.M.J. ii./80,889, and i./81,969.

The sweating and salivation from a full dose of Jaborandi or Pilocarpine persists from 2 to 4 or 5 hours, the symptoms come on in about 10 minutes after taking the dose if external conditions are favourable. Hypodermically the alkaloid acts in 3 to 5 minutes. A reduction of temperature on an average of 0·9° occurs under the influence of the drug. The face flushes first and then pales; it causes contraction of the pupil, tension of accommodation with approximation of the nearest and farthest points of distinct vision, and amblyopic impairment of vision from diminished sensibility of the retina. These effects do not last long. It is slightly narcotic, sometimes causes sickness in large doses, promotes secretion of milk and is antagonistic to atropine.—R.

Pilocarpia, Pilocarpine.

The pure alkaloid is not used medicinally. For characters and properties, see p. 162.

Pilocarpiæ Hydrochloras, Pilocarpinum Hydrochloricum, P.G.

Dose.—$\frac{1}{20}$ to $\frac{1}{2}$ grain by mouth or $\frac{1}{10}$ to $\frac{1}{3}$ grain hypodermically. In minute granular snow-white crystals, slightly deliquescent and very soluble in water. This salt is preferred on the Continent.

Pilocarpiæ Nitras.

Dose.—$\frac{1}{20}$ to $\frac{1}{2}$ grain as the hydrochlorate.

In minute white granular snow-like crystals, but may be obtained in large white prismatic crystals. Soluble 1 in 10 of water, freely soluble in hot, but very slightly in cold alcohol. This salt, preferred in England, was the first pure preparation of Pilocarpine prepared, and obtained by the author by crystallizing it from an alcoholic solution, thus freeing it from impurities.

Guttæ Pilocarpiæ, R.O.H.

Nitrate of Pilocarpine ...	2 grains.
Distilled water	1 ounce.

Dissolve. Used like Eserine salts to contract the pupil.

Injectio Pilocarpiæ Nitratis Hypodermica.

Nitrate of Pilocarpine ...	1 grain.
Distilled water	20 minims.

Dissolve. *Dose.*—2 to 6 minims.

Pilula Pilocarpiæ Nitratis.

Nitrate of Pilocarpine, $\frac{1}{20}$ grain triturated with sugar of milk and glycerine of tragacanth *q.s.* to make one pill.

References.

Useful for checking night sweating, a pill 2 or 3 times a day or repeated once or twice during the night.—Pr. xxiii.430.

The salts of pilocarpine possess all the before-mentioned properties of jaborandi in a marked degree; applied topically, they contract the pupil of the eye. Pilocarpine is antagonistic to atropine, and a complete antidote to poisoning by the latter. It promotes the growth of the hair in alopecia. Large doses are powerfully diaphoretic, small ones ($\frac{1}{20}$ grain) check night sweating of phthisis—does not over-dry the skin.—Pr. xxxiii.430.

Acute nephritis, used with effect in 0·03 gramme ($\frac{1}{2}$ grain) for a dose is large; a 2 per cent. solution applied to the eye produces strong contraction.—Binz.

Unilateral sweating, experiments on, pilocarpine affected the normal more than the diseased side.—Pr. xvii.401.

In kidney disease and dropsy, hypodermic use of $\frac{1}{15}$ grain for infants, or $\frac{1}{7}$ grain for 6 years, acts as a sialogogue and diaphoretic.—Pr. xxi.132.

In rheumatic iritis.—Pr. xxi.209.

Use as an oxytocic.—Pr. xxii.135.

The hydrochlorate applied locally caused high degree of myosis and slight spasm of accommodation; injected hypodermically, high degree of spasm of accommodation and slight myosis.—Pr. xxii.458.

To contract the pupil of the eye is less active (slightly) than eserine.—B.M.J. ii./79,364.

In poisoning by atropine 2½ grains, muriate of pilocarpine 2½ grains in centigramme (about $\frac{1}{7}$ grain) doses was a successful antidote.—B.M.J. i./80,366.

Antagonism to atropine.—L. ii./79,474.

In intermittent fever $\frac{1}{7}$ to $\frac{1}{5}$ grain of nitrate promptly cuts short the chill, produces sweating, and avoids hot stage altogether.—Pr. xxiii./365.

Summary of uses:—useful in nephritis, assists pains of labour, but will not originate them, diminishes urine in diabetes; action similar to eserine, but less irritating, in diseases of the eye; said to promote growth of the hair.—Pr. xxiii.374.

Three hypodermic injections successful in a comatose case of uræmia, albuminuria, with convulsions and complete anuria.—Pr. xxiv.129.

Relieves prurigo; in two cases of alopecia result undecided.—Pr. xxv.50; M.T.G. ii./80,554.

In skin diseases where the secretion of sweat was more or less altered, $\frac{1}{6}$ grain hypodermically twice a day found useful in prurigo, urticaria, and some cases of alopecia.—Pr. xxvi.128.

In asthma, doses of $\frac{1}{5}$ to $\frac{1}{3}$ grain of the hydrochlorate, hypodermically given systematically at intervals, is very serviceable.—B.M.J. i./80,917,960.

Action on pupil of eye is double, both dilates and contracts it, causes contractions by stimulating the third nerve. —L. ii./80,779.

Hydrophobia, 2 cases treated by $\frac{1}{3}$ grain injections, death resulted in both cases.—L. ii./80,491.

Puerperal convulsions treated by injection of Pilocarpine, pains became stronger, fœtus expelled, and rapid recovery.—B.M.J. i./81,511.

Therapeutic uses and physiological effects.—Med. Congress Rep. 1881,i.491.

In belladonna poisoning by 18 drachms of the liniment, 4 hypodermic injections of one-fifth of a grain was a direct antidote, and did not cause the least perspiration. —L. i./81,951; B.M.J. i./81,594.

Atropine poisoning successfully treated by pilocarpine given hypodermically.—B.M.J. i./81,300.

Relieved puerperal convulsions by 2 hypodermic injections of 15 minims of 1 per cent. solution. These caused much salivation, recovery was almost hopeless; but the pains improved, and fœtus was expelled, and, although unconscious for 2 days after, recovery was rapid. —B.M.J. i./81,511.

Hydrophobia, 1 case cured by hypodermic injections of $\frac{1}{4}$ grain doses of Pilocarpine.—M.R. 1883,146.

Fetid perspiration of the feet is cured permanently by hypodermic injection of Pilocarpine.—L. i./81,638; Pr. xxvii.461.

In diphtheria, notice of its use, combined with pepsin and hydrochloric acid; the abundant salivation detaches the membrane, &c.—L. ii./81,962; Pr. xxvi.378,461, and Pr. xxix.62.

Syphilis, 32 cases, 78 per cent. cured by Pilocarpine injections.—Pr. xxvii.380.

Action of injections of Pilocarpine on the hair, in one case changed colour from blonde to black, in another caused rapid growth.—L. i./82,78.

Case of hydrophobia treated successfully by 3 hypodermic injections of hydrochlorate of pilocarpine, 1 centigramme ($\frac{1}{7}$ grain).—L. i./82,1056.

In a case of locomotor ataxy, the hypodermic injection relieved the pain after morphia had failed.—L. ii./82, 909.

In deep-seated diseases of the eye, optic neuritis, with symptoms of meningitis at the base of the brain, and in conjunction with antisyphilitic treatment in specific eye diseases is often useful.—B.M.J. ii./82,684.

Recommended for myxœdema.—L. ii./83, 951; B.M.J. ii./83, 1071.

JUGLANDIN.

Dose.—2 to 5 grains, in a pill with mucilage of acacia.

The powdered extractive obtained from inner bark of root of butter-nut, *Juglans cinerea*. Colour dark brown. Is laxative and cathartic, without debilitating, useful in habitual constipation and biliousness.

A moderately powerful hepatic and mild intestinal stimulant.—B.M.J. i./79,177; Pr. xxiii.337.

Kairine.—See p. 77.

KAOLIN PRÆPARATUS.

Prepared Kaolin.

Native white silicate of alumina, which has been purified by elutriation from free silica and undecomposed felspar; it is a pearly white powder, unctuous to the touch and free from grittiness. It forms a useful absorbent powder to apply to infants and to irritated conditions of the skin generally. A special preparation, agreeably perfumed, having similar chemical and physical properties, is sold under the name of Cimolite. It is a pure white soft powder. Kaolin is unacted upon by most chemical reagents; it is, therefore, useful for diluting such salts as nitrate of silver and permanganate of potash, either to form them into powders or into pills.

Preparation.

Unguentum Kaolin.

Vaseline	1 ounce,
Paraffin	1 ounce.
Melt and add	
Kaolin	1 ounce.

Stir till cold.

Spread on rag to apply to abraded skin; it allays irritation. It forms a useful excipient for nitrate of silver and permanganate of potash pills.—See Potassæ Permanganas, p. 223.

Absorbent Powders.—In addition to Kaolin the following are used medically.

Fuller's Earth, is also a native silicate of alumina, with traces of iron, grey in colour when in powder.

Talc, a native foliaceous silicate of magnesia; that obtained from the Tyrol—Venetian Talc—is very soft and unctuous.

French Chalk, a harder silicate of magnesia than talc, forms a soft powder.

Selenite, a transparent variety of gypsum, native sulphate of lime reduced to powder, is soft and pearly.

Oxychloride of Bismuth.—See Bismuthi Oxychloridum, p. 60.

Oxide of Zinc, various **Starches,** powdered **Orris Root,** and mixtures of these, perfumed, are employed for toilet purposes.

Calamine, Calamina præparata, P.L.

Syn.—LAPIS CALAMINARIS PRÆPARATUS.

Impure oxide of zinc prepared by calcining native

Calamine (carbonate of zinc) and reducing it to an impalpable powder; should be almost entirely soluble in diluted sulphuric acid, to which solution, when potash or ammonia is added in excess, the precipitate first formed is redissolved. Genuine Calamine, on account of its physical characters, when of a neutral flesh tint, is preferred to the other zinc powders, as a dusting powder or for making lotions.

Ceratum Calaminæ, P.L.

Syn.—TURNER'S CERATE.

Calamine and Yellow Wax, of each	15
Olive Oil	40

A useful application to burns.

Lotio Calaminæ, U.C.H.

Levigated Calamine ...	40 grains.
Oxide of Zinc	20 grains.
Glycerine	20 minims.
Water (or Rose Water) to ...	1 ounce.

Elutriate the calamine and oxide of zinc by triturating them in a mortar with successive portions of the water and decanting from the siliceous matter, and add the glycerine.

Used in eczema, especially where the surface is red and tender, also to conceal acne spots on the face. One grain of perchloride of mercury may be added to 6 ounces of it.

LEPTANDRIN.

Dose.—¼ to 2 grains in a pill, with glycerine tragacanth.

A dark greenish brown resinoid powder obtained fro culvers root, *Leptandra Virginica.* It excites the liv and promotes flow of bile, without any irritation the bowels—¼ to 2 grains twice or three times a da Is useful in dyspepsia, diarrhœa, and cholera infantu

References.

One grain is a very useful cholagogue and alterative 2 grains have an aperient action; acts well combin with podophyllin in bilious headache.—B.M.J. ii./7 113.

On dog a moderate hepatic, but feeble intestinal stimulant.—B.M.J. Rep. 1878,66; Pr. xxiii.410.

Aperient, alterative, and tonic to the stomach, has been given in diarrhœa and dysentery.—L. ii./62,239.

LIQUOR ALUMINII ACETICI.

Solution of Acetate of Aluminium, P.G.

Sulphate of Alumina (true) ...	300
Acetic Acid, B.P. (by weight) ...	386
Precipitated Carbonate of Lime ...	130
Water	1,000

Having dissolved the sulphate in 800 parts of water, add the acetic acid, and while constantly shaking pour in by degrees the carbonate of lime mixed with 200 parts of water. Set aside for 24 hours in a warm place, and shake frequently, then decant, press the sediment, and filter the solution. Contains 7½ to 8 per cent. of subacetate of aluminium.

Diluted with twice as much water, thus making a 2½ per cent. solution, it has been used as an antiseptic lotion, and gauze impregnated with a 5 per cent. solution has been used as an antiseptic dressing by Maas of Freiburg. The solution is a powerful antiseptic and slight astringent.—M.T.G. ii./80,506.

Liquor Aluminii Chloridi.

A straw-coloured inodorous liquid, with an astringent taste and acid reaction, Sp. Gr. 1·250; may be obtained by the double decomposition of sulphate of aluminium and chloride of calcium. It possesses strong antiseptic properties.

Chloralum.

The common disinfectant, prepared like the last and sold under this name, is a much weaker solution, and is darker in colour, owing to its containing some perchloride of iron in solution.—L. ii./70,354,527.

LITHII BROMIDUM.

Bromide of Lithium, U.S.

Dose.—5 to 15 grains.

A white granular salt, very deliquescent, odourless, having a sharp, somewhat bitter taste and neutral reaction; very soluble in water and alcohol. A given weight contains nearly half as much more of bromine as the same weight of bromide of potassium, and its effect as a bromide is said to be even greater than this ratio, especially as a hypnotic, and to be used in epilepsy.

LUPULINUM.

Lupulin, U.S.

Dose.—2 to 5 grains in a pill, with glycerine and spirit.

The bright brownish yellow, or yellowish brown glandular powder, separated from the strobiles of the hop—*Humulus Lupulus*. It is aromatic and bitter, and contains most of the active properties of the hop—the resin and volatile oil. It is used in insomnia and for alcoholism.

LYCOPODIUM.

Clubmoss Spores.

The spores of *Lycopodium clavatum*, common clubmoss, form a fine, mobile, inodorous, tasteless powder, with a pale yellow hue. Lycopodium is a strong repellent of aqueous moisture, floats on water, yet sinks in it after boiling. By strong trituration it coheres and leaves an oily stain on paper. It is immediately moistened by oily and alcoholic liquids, chloroform and ether, and, having great power in absorbing oils and oleo-resins, it is a useful excipient to form these into pills.

It forms a good pill powder, protecting hygroscopic pills, is useful as a diluent for insufflations for the throat and ear, and as an inert dusting powder for excoriated and weeping surfaces of the skin. When ignited, it explodes with a flicker.

MALTUM.

Malt.

Syn.—BYNE.

Malted barley contains the ferment Diastase, which possesses the property, under certain conditions, of converting starch into dextrin and sugar (maltose). Malt flour and other preparations of malt are used medicinally to assist the digestion of starchy foods.

Malti Pulvis.

Dose.—1 to 2 drachms.

Malt flour or entire malt powdered, is added to baked wheaten flour in various proportions to form the popular infants' foods. When these are mixed with hot water or a mixture of hot milk and water, the starch contained in the wheaten flour becomes soluble and digested into dextrin and malt sugar. The diastasic property of malt is most acute in aqueous solution at 140° F.—a boiling heat destroys it. A small teaspoonful of malt flour may be sprinkled over or mixed with cooked farinaceous foods, such as porridge, gruel, bread and milk, or arrowroot, when cool enough to sip, or it may be infused in a cup of coffee, glass of beer, or cold water; the latter form pleasant and useful beverages when taken with meals, to assist the digestion of bread or other farinaceous food.

Extractum Malti, P.G.

Syn.—EXTRACTUM BYNES.

Dose.—1 to 4 drachms.

A syrupy, yellowish brown liquid, having a pleasant sweet taste, consisting principally of dextrin and malt sugar (maltose), and possessing some diastasic properties. According to the German pharmacopœia, it is made by first moistening ground Malt with cold water, macerating and adding more water and digesting at 149° F., then *boiling*, straining and evaporating to a thick extract. The *boiling* destroys the diastasic property, but makes the extract keep better. Much of this preparation in commerce is weak in diastase, being made by mixing with water at the proper temperature 1 part of bruised Malt with 6 to 10 parts of maize or other cereal flour,—the starch of the latter is converted into dextrin and maltose; on pressing, filtering, and evaporating at a low temperature, a syrupy extract is obtained which still contains some unexhausted diastase. Extract of Malt and its preparations are prescribed in cases of debility of all kinds, as a restorative, like cod liver oil, but particularly where digestion is weak.—B.M.J. i./79,683; L. i./79,125; M.T.G. ii./78,529.

Extractum Malti Ferratum, P.G.

Pyrophosphate of Iron ...	2 parts.
Water	3 parts.

Dissolve and add Extract of

Malt...	95 parts.

Mix.

Dose.—1 to 4 drachms.

Extractum Malti cum Oleo Morrhuæ.

Dose.—1 to 4 drachms.

The percentage of oil in this preparation is variable and it quickly turns rancid; a little salicylic acid is often added to prevent it becoming so.

Infusum Malti.

Malt, bruised	3 ounces.
Cold Water	10 ounces.

Infuse 12 hours, and strain to produce 7 ounces.

Dose.—2 to 4 drachms with meals, in water or milk, or added to cooked gruel or porridge (Pr. xxiii.401). This infusion is rich in diastase but keeps badly; a minim of chloroform added to each ounce will keep it.

MANGANESII OXIDUM NIGRUM.

Black Oxide of Manganese (*Off.*).

Dose.—4 to 30 grains.

Manganesii Oxidum Præcipitatum.

Dose.—3 to 10 grains, or more, in pills with syrup.

Consists principally of hydrated manganic oxide, a bulky blackish brown powder, free from grittiness and entirely soluble in cold hydrochloric acid. Is more suitable for medicinal purposes than the above. Useful in gastrodynia, and in amenorrhœa taken 3 or 4 times a day before expected period.—L. i./83, 7.

Manganesii Phosphas, **Phosphate of Manganese,** Manganous Phosphate.

Dose.—1 to 5 grains.

A white powder, generally with a pinkish tint, insoluble in water. From ½ to 1 grain is sometimes dissolved in 1 drachm of syrup of phosphate of iron for a dose.

Manganesii Sulphas, **Sulphate of Manganese,** Manganous Sulphate.

Dose, of powder.—2 to 10 or 60 grains or more.

Is usually met with as a white powder with a faint pink tint, due to a little manganic sulphate. Crystals may be obtained with difficulty, in form like ferrous sulphate, but with an amethyst tint. For jaundice, 60 grains is a cholagogue purgative.

It does not excite the liver, though it is a powerful excitant of the intestinal glands of the dog.—B.M.J. i./79,105,177.

Potassæ Permanganas.—See p. 223.

MENISPERMIN.

Dose.—1 to 5 grains, in a pill with glycerine of tragacanth.

The powdered extractive of a pale brown colour obtained from the root of yellow parilla—*Menispermum fenestratum*—and *M. Canadense.* Is an alterative tonic, laxative, diuretic, stimulant, and resolvent, useful in indigestion.

Pilula Menispermin.

Menispermin	... ...	2 grains.
Glycerine of Tragacanth	...	*q.s.*

To make one pill. Taken 3 times a day, is a tonic, laxative, diuretic, and alterative.—L. ii./62,20.

On the dog is a slight intestinal, but not a hepatic stimulant.—B.M.J. ii./78,909; Pr. xxiii.423.

MENTHOL.

Dose.—½ to 2 grains or more in a pill with powdered soap, or in solution in olive oil.

A white crystalline stearoptene resembling sulphate of magnesia in appearance if dry, or in long needles, sometimes in crystalline masses, moist from adhering liquid oil. Imported principally from Japan and China, and obtained from *Mentha arvensis, vars. piperascens et glabrata,* it melts when pure at 97° F. It is insoluble in glycerine, but should be freely and entirely soluble in rectified spirit, ether, chloroform, and fixed and volatile oils; sparingly soluble in water, but imparts to it the strong odour and taste of peppermint. It produces a warmth and glow on the tongue, and sensation of coolness on drawing the breath over it. Given internally, it acts as a diffusible stimulant. Its solutions, applied topically to the skin in a similar manner, affect the nerves of the part somewhat like aconite, and form useful pigments for neuralgia, having the advantage of being non-poisonous. It has powerful antiseptic properties, but is not caustic; its action more resembles that of an anæsthetic. The moist variety is put up and sold, moulded into sticks and pencils for relieving neuralgia; this kind of Menthol, having a low melting point, liquefies when gently rubbed on the painful part.

Equal parts of Menthol and Thymol rubbed together liquefy and form an oily liquid, similar liquefactions take place on triturating respectively equal parts of Menthol, and Absolute Phenol, equal parts of Menthol and Chloral Hydrate, 3 parts of Menthol and 2 parts of Camphor, 2 parts of Menthol and 1 part of Croton Chloral Hydrate, and 2 parts of Menthol, with one of each Carbolic Acid and Croton Chloral Hydrate. These form colourless transparent oily fluids; when applied on cotton wool are useful for relieving toothache arising from carious teeth, or preparing them for stopping; the pain is promptly relieved, and all symptoms obtunded during the process of filling.

Linimentum Menthol.

Menthol 3, chloroform 4, olive oil *q.s.* to 16; is useful in lumbago, neuralgia, and sciatica.

As an antiseptic and antineuralgic, 1 in 60 of rectified spirit, with a little oil of cloves added; useful in sciatica, intercostal neuralgia and the crystals on cotton wool for toothache.—L. i./79,822; L. ii./79,335,376,448.

Sciatica, 3 cases relieved by applying alcoholic solution 1 in 20, might be used 1 in 10.—L. ii./79,750.

Chemical properties and uses.—P.J. 1879,391.

Ringworm of the scalp, recommended and used for with success, 1 part Menthol in 4 volumes of chloroform and 12 volumes olive oil.—L. i./81,241.

Po-ho-yo.—Chinese oil of peppermint, not obtained from *Mentha piperita*, but having the odour of the British plant, is sold as Japanese Drops or *Gouttes Japonnaises* for the relief of neuralgia, in little bottles and cases, labelled with Chinese characters. It is much used by the Chinese and Japanese for the relief of neuralgia. A little should be smeared on the painful part, or applied on cotton wool to a carious tooth. It is rich in Menthol, which crystallizes and solidifies the oil when exposed to cold.

METHYLENI BICHLORIDUM.

Bichloride of Methylene.

Syn.—METHYLENE CHLORIDE.

A dense colourless ethereal liquid, with a chloroform-like and faint garlic odour; has Sp. Gr. 1·332, boiling point 104° to 106° F. May be obtained by the action of chlorine on iodide of methylene, or commercially by carefully heating and distilling a mixture of chloroform and alcohol in the presence of ammonia and metallic zinc; methylic alcohol may be employed.

A mixture sold in London under this name produces similar effects to chloroform slightly diluted with ether, and on examination was certainly not a simple substance, for it commenced to boil at about 90°, and after a portion had evaporated, the remainder boiled at about the same temperature as chloroform. As yet, pure specimens have not been met with in commerce.—G.

Lectures on introducing it as an anæsthetic.—M.T.G. ii./67,423,479,559,693.

Is as suitable for long operations as chloroform.—L. i./71,591.

Used with most favourable results at Guy's Hospital.—L. i./71,634.

Given 1800 times without ill effects; it is more rapid in producing unconsciousness than chloroform and quicker in passing off.—L. i./72,671.

By Junker's apparatus, air charged with methylene vapour is given, not the vapour itself, and, so employed was efficient and safe.—B.M.J. ii./77,176.

Report on anæsthetics; it is a mixture; effect on rabbits described; its danger is from syncope, not coma. —B.M.J. i./79,1,3.

Deaths from inhalation of.—B.M.J. ii./74,823; B.M.J. ii./75,113.

A commercial sample had Sp. Gr. 1·326, is said to be chloroform reduced to this density by alcohol.—N.R. xii.43.

MORPHIA.

Morphine.

Dose.—$\frac{1}{10}$ to $\frac{1}{2}$ grain.

This alkaloid, to which the medicinal effects of opium are principally due, in the pure state is, if precipitated from an aqueous solution of its salts, a white amorphous powder, or, if crystallized from an alcoholic solution, is in white, shining, transparent acicular prisms, insoluble in water and ether, freely soluble in boiling and but slightly in cold alcohol; soluble in caustic potash solution, milk of lime, and readily dissolved by acids, forming salts, from solutions of which it is precipitated by ammonia, but not by potash. The crystallized alkaloid is a very stable and definite preparation. 3 parts are medically and commercially reckoned equal to 4 parts of either of the official salts (acetate and hydrochlorate). Morphia preparations are incompatible with those of perchloride of iron.

Oleatum Morphiæ.

A solution of the alkaloid morphia in oleic acid 1 grain in 1 drachm is sold under this name for local application to relieve pain. Sometimes it is ordered twice or three times the above strength. Oleic acid will dissolve as much as one-tenth of its weight of pure morphia. The addition of morphia is made to oleate of mercury applications when the latter cause much pain.—L. i./72,809.

Morphiæ Acetas (*Off.*).

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ grain, which may be increased.

In commerce a white amorphous powder, soluble 1 in $2\frac{1}{2}$ of water (if recently made and not very dry), soluble also in spirit. Liable to change and turn brownish in colour.

The dose of morphia and of opium is often much increased when persons become addicted to their use. The author, under medical direction, for several years anterior to 1868, dispensed for a lady, who had previously been a dipsomaniac, 6 dozen powders weekly, each containing 2 grains of acetate of morphia and 6 grains of sugar of milk. She took on an average over 20 grains of the morphia salt daily for years. She had taken powders containing as much as 8 grains of pure acetate of morphia in each; the sugar of milk was added gradually to replace the morphia, hoping to break her of the habit, but this had only the effect of making her take an increased number of the powders, so as to obtain about the same amount of morphia to satisfy her craving.

Injectio Morphiæ Hypodermica (*Off.*).

Dose.—1 to 6 minims; 12 minims = one grain of the acetate.

Is made by precipitating the alkaloid from 88 grains of hydrochlorate of morphia by means of excess of solution of ammonia, washing the precipitate and redissolving by adding acetic acid to make the mixture very slightly acid, further adding distilled water *q.s.* to measure exactly 2 fluid ounces, and then filtering. The Pharmacopœia states that 1 drachm contains 5 grains of acetate of morphia, corresponding to 4·3 grains of morphia when precipitated with ammonia and dried. This is an error, it is much in excess of the possible yield from the quantity of hydrochlorate directed to be used.

It is only one-half the strength of that frequently used. Acetate of morphia becomes less soluble with age. It is necessary either to use it freshly prepared or to use an equivalent quantity of the pure alkaloid dissolved by means of acetic acid. The author recommends the following process for producing the injection.

Injectio Morphiæ Acetatis Hypodermica.
1 in 6, double the strength of the last preparation.

Dose.—1 to 3 minims.

Morphia (pure alkaloid) ... 60 grains.
Place in an ounce vial and moisten with
Distilled Water ... ... 6 drachms.
Add
Acetic Acid ... ... 40 minims, or *q.s.*

To make the solution barely bright after being kept closed at a gentle heat for 24 hours. Then filter and sprinkle and wash the filter with sufficient

Distilled Water to make the
product measure exactly... 1 ounce.

Shake to make uniform, and keep the solution from the light in stoppered bottles, the stoppers of which should be coated with paraffin wax, by first heating them and rubbing the ground part over with the wax as it melts. If the stopper be then inserted firmly, it prevents any oozing or encrusting of the morphia around the neck of the bottle; a few drops of glycerine added, will, it is said, prevent any encrustation. It has a straw colour, changing to vinegar-brown on keeping.—P.J. 1870,481; B.M.J. ii./80,728; B.M.J. i./81,146.

Injectio Morphiæ et Atropiæ Hypodermica.

Injection of Acetate of Morphia
(1 in 6) ... ... 3 drachms.
Sulphate of Atropine... ... 1 grain.

Dose.—1 to 3 minims. 3 minims contain half a grain of acetate of morphia and $\frac{1}{60}$ grain of sulphate of atropine. Some practitioners prefer to use it half this strength. Although atropine is in many respects antagonistic to morphia, yet, given in combination with it in small doses, the former increases the sedative action and counteracts the disagreeable effects of the latter on the head, stomach, and bowels.

Liquor Morphiæ Acetatis (*Off.*).

Dose.—10 to 60 minims. Contains 1 grain in 2 drachms (of rectified spirit 1 part, distilled water 3 parts with 2 minims of diluted acetic acid).

Pastillus Morphiæ Acetatis.—See p. 141.

Pastillus Bismuthi Carbonatis cum Morphiæ Acetate.—See p. 141.

Morphiæ Hydrobromas.

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ grain.

In commerce is met with as a white amorphous powder resembling the hydrochlorate of morphia in appearance. Sometimes administered with free hydrobromic acid as a sedative, and thought not to affect the head so much as other salts of morphia when given thus.

Morphiæ Hydrochloras (*Off.*).

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ grain, which may be increased. In a pill it may be combined with sugar of milk and glycerine of tragacanth.

In silky white flexible acicular prisms, but usually met with in amorphous white powder, soluble 1 in 26 of water. It is stable, and the most frequently used of the salts of Morphia.

Linctus Morphiæ, U.C.H.

Solution of Hydrochlorate of Morphia	3 minims.
Spirit of Chloroform ...	3 minims.
Treacle, Honey, or Glycerine	60 grains.
Water to	1 drachm.

Mix. May be more agreeably flavoured with syrup of lemon as a vehicle.

Dose.—A teaspoonful 3 or 4 times a day; or the dose may be repeated frequently at times when cough is troublesome, till the paroxysm is subdued. It should be taken undiluted, swallowed slowly, and allowed to hang about the throat. For children of 8 to 14 years, dose 10 to 20 drops. It is not suitable for very young children, or where there is difficulty of expectoration in bronchitis.

Liquor Morphiæ Hydrochloratis (*Off.*).

Dose.—10 to 60 minims, contains one grain in 2 drachms (of rectified spirit 1 part, distilled water 3 parts, with 2 minims of diluted hydrochloric acid).

Suppositoria Morphiæ (*Off.*).

Contain $\frac{1}{2}$ grain of hydrochlorate in each. They are also usually kept, containing only $\frac{1}{4}$ grain, as well as other strengths.

Suppositoria Morphiæ cum Sapone (*Off.*).

Contain $\frac{1}{2}$ grain of the hydrochlorate in each also, but are never ordered, and have a bad basis.

Trochisci Morphiæ (*Off.*).

Contain $\frac{1}{36}$ grain of the hydrochlorate in each lozenge, with a sugar basis flavoured with tolu. They are more agreeable if made with black currant paste basis.

Trochisci Morphiæ et Emetin, see p. 112.

Trochisci Morphiæ et Ipecacuanhæ (*Off.*).

Contain $\frac{1}{36}$ grain of the hydrochlorate of morphia, with $\frac{1}{12}$ grain of ipecacuanha in each. These lozenges are often given to allay cough—one 5 or 6 times a day.

Morphiæ Meconas.—Meconate of Morphia.

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ grain.

This is the natural salt of morphia existing in opium, and, when pure, is in white minute acicular crystals, soluble 1 in 34 of water. It is said to disturb the head less, as well as derange the stomach and bowels less, than the other salts of morphia administered either by the mouth or hypodermically.

Liquor Morphiæ Bimeconatis.

Dose.—10 to 30 minims.

A special preparation the same strength as tincture of opium.

Morphiæ Sulphas.

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ grain.

In hard white silky acicular crystals, is a stable salt of morphia and the one preferred in the United States. Soluble 1 in 23 of water.

Liquor Morphiæ Sulphatis. Used in the United States.

Dose.—1 drachm or more. Contains 1 grain in an ounce of distilled water. A preparation known as Magendie's solution of morphia is also used in the United States; it is 16 times stronger than the above (containing 16 grains in the ounce). Magendie's solution in France is slightly stronger than that of the United States; it contains 1 part of acetate of morphia in $37\frac{1}{2}$.

Morphiæ Tartras.

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ grain.

Neutral tartrate of morphia in commerce is a white amorphous powder resembling the commercial hydrochlorate. Readily soluble in water, 1 in 10; has been recommended for hypodermic injection.

Injectio Morphiæ Tartratis Hypodermica.

Dose.—1 to 6 minims.

Tartrate of morphia ...	30 grains.
Distilled water	6 drachms.

Dissolve.

References.

Antagonism of atropia, $\frac{1}{20}$ grain = 1 grain of morphia in cases of poisoning; small doses of the former should be frequently repeated hypodermically.—B.M.J. i./81,239.

Antagonism of caffeine, coffee, tea, &c., to Morphia. —B.M.J. ii./74,615,674,679,771.

MUSCARIÆ NITRAS.

Muscarine Nitrate.

Dose.—(?) $\frac{1}{2}$ to $\frac{3}{4}$ grain hypodermically causes free perspiration, &c., like Pilocarpine.

Muscarine is an uncrystallizable alkaloid obtained from the fungus, fly agaric—*Agaricus* or *Amanita muscaria*, it has also been obtained, as a derivative, from brain substance. Nitrate of Muscarine, the only preparation met with in commerce, is also uncrystallizable; it is a viscid, yellowish brown liquid, hygroscopic, and soluble in water.

It resembles Pilocarpine in action and is almost completely antagonistic to atropine, one exception being that, applied topically to the eye, it dilates the pupil, like gelsemium, but given internally it contracts it. It produces salivation, perspiration, flow of tears, and purgation.—R.

Useful in checking night sweating. Ext. Muscariæ was used.—Pr. xxv.89.

Antagonistic to atropine, acts like pilocarpine.—Pr. xxvi.5.

Further, see Das Muscarin, Schmiedeberg und Koppe (Leipzig 1869; F. C. Vogel).

Atropine is an antidote of the effects of poisonous mushrooms, $\frac{1}{120}$ grain injected hypodermically and repeated if necessary until the dyspnœa is relieved.—B.M.J. ii./74,617.

Physiological experiments—its antagonism to atropine. —Trans. Med. Congress, 1881, i.508; B.M.J. ii./82,529.

Note on its physiological action.—L. i./83,336.

MYRICIN.

Dose.—2 to 5 grains, in a pill with glycerine of tragacanth.

The powdered extractive obtained from the bark of stem and root of bayberry, *Myrica cerifera.* Is astringent and stimulant, in large doses emetic—used in diarrhœa and jaundice.

References.

On the dog is a very powerful stimulant of the liver. During the increased secretion of the bile, the percentage of the special bile solids is not diminished. If the dose be too large, the secretion of bile is not increased. It is a powerful intestinal irritant.—B.M.J. Rep. 1878,4; B.M.J. i./79,177.

NAPHTHOL.

β Naphthol.

Syn.—NAPHTHYL ALCOHOL.

A coal-tar derivative with a faint storax odour; when sublimed, is in white shining laminar crystals, soluble in alcohol, ether, chloroform, and benzine, sparingly soluble in hot water, but soluble 1 in 8 of olive oil and lard, and 1 in 80 of vaseline. Has the advantage in skin diseases generally of being odourless and colourless. In advanced scabies, an ointment of 10 to 15 per cent. cures the eczema as well as destroys the parasite, but the following ointment is preferred:—Naphthol 15, lard 100, green soap 50, prepared chalk 10. Useful also in psoriasis.—B.M.J. ii./81,612; B.M.J. i./82,47,156.

Napthol 5, alcohol 100, glycerine 10, is a remedy for hyperidrosis of palms, soles, and axillæ.—Pr. xxxi.219.

Naphthalin.

A hydrocarbon formed in large quantities in the manufacture of coal gas. It is when pure in shining white rhomboid crystalline plates, with a strong tarry odour; it is insoluble in water, acidulated or alkaline, but is soluble in ether, hot alcohol, and in fats, fixed and volatile oils.

Used in antiseptic dressings with success as an alternative to iodoform.—B.M.J. ii./82,1051.

A 10 to 20 per cent. solution in oil is successful as a parasiticide in scabies, but does not relieve the secondary eruptions.—L. ii./82,909.

NARCEIA.

Narceine.

Dose.—½ to 1 grain, in a pill with glycerine of tragacanth.

An alkaloid obtained from opium in light white, flexible silky crystals. Has a slightly bitter taste—is a weak base, soluble 1 in 400 of water, very soluble in spirit, insoluble in ether. It is a soporific, produces no constipation, less headache and perspiration than morphia.—R.

References.

More soporific than morphia and codeia, and the sleep more profound.—L. i./66,250.

Hypnotic use of, and to check cough of pertussis.—B.F.M. Ch.R. ii./66,526.

Causes sleep rather than allays pain, used as a sedative in violent cough.—B.F.M. Ch.R. i./67,527.

Prosopalgia (faceache) cured by hypodermic use of.—B.F.M. Ch.R. i./72,127.

The most soporific of the opium bases, and less poisonous than thebaine, codeia, and papaverine.—B.F.M. Ch.R. i./72,509.

NARCOTINA.

Narcotine.

Dose.—1 to 3 grains, or more, in a pill with glycerine of tragacanth.

An alkaloid obtained from opium, in white inodorous crystalline prisms. It is a very weak base, insoluble in water, soluble 1 in 3 of chloroform, 1 in 100 rectified spirit, 1 in 125 ether, soluble also in benzol. Possesses antiperiodic properties, like quinine, some considering it superior, in doses of 1 to 3 grains.—R.

References.

Antiperiodic for remittent fever. 1½ to 3 grains; in doses of 10 grains, produces diaphoresis.—L. i./62,53.

In India, for ague, considered second only to quinine. —M.T.G. ii./62,203.

In 8-grain doses has no narcotic nor anæsthetic effect.—Rank. ii./72,125.

NICOTIA.

Nicotine.

Dose.—$\frac{1}{8}$ to 1 grain.

A colourless volatile liquid alkaloid, obtained from the tobacco—*Nicotiana Tabacum*. Darkens with age, has a strong, disagreeable odour, soluble in water, more so in rectified spirit and ether.

References.

Tetanizes the heart, has been highly praised for tetanus. Many recorded cases appear to show its usefulness in this disease.—R.

Physiological effects.—B.F.M.Ch.Rev. i./56,243.

Is an antidote to strychnia.—Rank. ii./66,225.

NITROGLYCERINUM.

Nitroglycerine.

Syn.—GLONOINE; TRINITRATE OF GLYCEROL; NITRIC ETHER OF GLYCERINE (formerly considered as the Trinitrite of Glycerol or Nitrous Ether of Glycerine).

Dose.—$\frac{1}{200}$ to $\frac{1}{50}$ grain increased to $\frac{1}{10}$ grain.

This dangerous explosive substance has of late been brought into medicinal use, and proved of great service, especially in angina pectoris. It is obtained by gradually dropping pure glycerine into a mixture of sulphuric and fuming nitric acids kept cool by iced water. The Nitroglycerine is separated by pouring the mixture into a large quantity of water, and well washed by agitation with several supplies of cold water, till free from acidity. It is then collected as a dense, opaque white, oily liquid, and carefully dried in thin layers in a warm room, when it becomes dehydrated, transparent, and colourless, and of Sp. Gr. 1·600. It drops in very small drops. It has no odour, yet is slightly volatile, has a sweet aromatic, pungent taste, and produces headache, which, if dose be large, lasts some hours. It is slightly soluble in water, freely soluble in ether, 1 in 6 of almond oil, freely soluble in absolute alcohol, and 1 in 15 of rectified spirit. Three parts mixed with and absorbed by one part of an infusorial earth, so as to become solid, forms Dynamite, which is much used for blasting purposes. The alcoholic solution, containing 1 per cent., was first used medicinally; but, as complaints were made to the author that it was inconvenient for patients to carry a liquid medicine about with them, as they were required to do, to ward off attacks of angina, he, having discovered that nitroglycerine was soluble in oils and fats, dissolved it in oil of theobroma and combined this with chocolate to form tablets, which he adjusted in strength to contain $\frac{1}{500}$, $\frac{1}{100}$, $\frac{1}{50}$, and $\frac{1}{25}$ grain of Nitroglycerine in each. Those containing $\frac{1}{100}$ grain are the most suitable for general use. The fatty basis can also be made into white transparent coated pills containing doses similar to the tablets. A one per cent. oily solution is recommended as being more stable than the alcoholic solution. Nitroglycerine, especially if not perfectly pure, is liable to explode spontaneously, but in fatty or oily solution it is perfectly safe and stable.

Nitroglycerine, in two minutes after taking a dose, accelerates the pulse, relaxes the arteries, produces a feeling of fulness all over the body, but particularly in the head by a throbbing at the sides of the temples. It also causes headache, which lasts from 15 minutes to several hours, according to the quantity taken; but to patients accustomed to its use the headache is not felt. In treating angina pectoris, neuralgia, asthma, headache, sea-sickness, and Bright's disease, its action is like nitrite of amyl, but its effects last much longer.

Preparations.

Liquor Nitroglycerini, 1 per cent.

Dose.—$\frac{1}{2}$ to 2 minims, gradually increased to 10 minims, if necessary, every 3 or 4 hours, in any aqueous vehicle.

Nitroglycerine ... ... 1 grain.
Rectified Spirit to ... ... 100 minims.

Dissolve. A five and a ten per cent. solution in absolute alcohol are also prepared commercially, but they are not safe for use in dispensing.

Oleum Nitroglycerini, 1 per cent.

Dose.—1 to 2 drops or more on sugar.

A one per cent. solution in almond oil.

Pilula Nitroglycerini.

Is made with the theobroma-oil basis to contain $\frac{1}{100}$ to $\frac{1}{50}$ grain or more.

Nitroglycerine Tablets.—Recognised as Trochisci Nitroglycerini by L.H., $\frac{1}{100}$ grain in each. The tablets have the nitroglycerine in solution in chocolate, in a perfectly safe, stable, and palatable form.

Dose.—One tablet every three or four hours to relieve or ward off attacks of angina pectoris, sea-sickness, neuralgia, Bright's disease, headache, &c. A tablet should be eaten and quickly swallowed when an attack of angina threatens; for this their use is preferable to the pills, which require a few minutes to dissolve. A dose of any preparation of nitroglycerine acts more promptly if taken on an empty stomach.

The tablets are also prepared containing $\frac{1}{50}$ and $\frac{1}{25}$ grain in each, for those accustomed to their use, as well as $\frac{1}{200}$ grain in each, for administration to ladies, delicate persons and children, for whom this is a sufficient dose to ward off sea-sickness.

They are attractive in appearance, and cannot be distinguished by the taste alone from ordinary chocolate creams.—L. i./79,850.

In a case of angina pectoris in which they were prescribed the relief afforded was most marked. . . . . They are certainly active; whilst they are agreeable to the taste.—B.M.J. i./79,899.

Fifty per cent. of cases of sea-sickness are benefited by the nitroglycerine tablets.—B.M.J. ii./80,512,691.

Found the nitroglycerine tablets the most convenient and ready method of using nitroglycerine.—B.M.J. ii./81,424.

The best method of administration is in the form of lozenges. They should be taken when the patient is threatened with an attack of asthma; or, if the attacks occur in the night, at bedtime, or whenever the patient wakes.—B.M.J. ii./81,543.

Cases of angina pectoris treated with success in doses of one minim of 1 per cent. solution of nitroglycerine, upwards to, in one case, 10 minims every 3 or 4 hours, or as attacks required it.—L. i./79,80,115,151,225. *Reprinted as* "Nitroglycerine in angina pectoris," by W. Murrell.

Two minims of 1 per cent. solution every 3 or 4 hours, or 5 minims when an attack threatened in a case of angina pectoris gave complete relief—great boon to sufferer, who had perfect confidence in being able to control attacks.—L. i./79,578.

Checks the paroxysms of angina, $\frac{1}{100}$ to $\frac{1}{80}$ grain every 4 hours. The dose may be increased up to $\frac{1}{8}$ grain.—Pr. xxii.208; Br. ii./79,xxix.

Studies on its therapeutic uses.—B.M.J. i./80,406,487; M.R. 1883,87.

Bright's disease, acute and chronic, and in vascular tension of the aged, the 1 per cent. solution in dose of 1 to 3 minims was successful.—B.M.J. ii./80,803.

Myxœdema, case of, treated successfully with $\frac{1}{80}$ grain doses of nitroglycerine in conjunction with elaterium purgings.—L. i./82,440.

Puerperal convulsions, $\frac{1}{100}$ grain every hour arrested in 4 or 5 doses. Nitroglycerine also acts as an aperient, causing free evacuation of the bowels.—B.M.J. i./82,573.

The alcoholic solution 1 per cent. relieves toothache applied on cotton wool in the cavity of a carious tooth.—Pr. xxvii.285.

In epileptic vertigo, 1 to 2 minim doses of 1 per cent. solution quite relieved.—Pr. xxx.105.

In migraine, due to anæmia, a minim of 1 per cent. solution repeated every half-hour, if desirable, useful also in epilepsy, especially in cases of *petit mal* given in conjunction with bromides.—New York Med. Jour., Dec. 1882,662.

In a case of angina pectoris, the effect of 1 per cent. solution in 1 to 3 minim doses compared with that of nitrite of soda.—Pr. xxx.179,321.

In uræmic asthma, $\frac{1}{100}$ grain doses thrice daily, was useful.—B.M.J. i./83,811.

In chronic albuminuria, $\frac{1}{100}$ grain every 3 or 4 hours, found useful.—M.T.G. i./84,538.

OLEATA.

Oleated Preparations.

Acidum Oleicum, Oleic Acid.

A pale-sherry-coloured oily liquid (at ordinary temperatures) with a slight but not disagreeable odour, obtained by the action of superheated steam on palm oil, and afterwards separating by pressure the liquid oleic from the solid palmitic acid. It is acid to test paper, insoluble in water, but is dissolved readily by rectified spirit, ether, chloroform, benzol, and fixed oils; it dissolves most metallic oxides, thus forming indefinite oleic solutions of oleates in an excess of Oleic Acid; such combinations of bismuth, copper, lead, mercury, and zinc are used medicinally; they are soluble in oils, fats, and petroleum ointments. Those of mercury and zinc are most in request. Oleic Acid also dissolves alkaloids, but not their salts, *e.g.* Oleate of Aconitine (see Aconitia, p. 34), Oleate of Atropine (see Atropia, p. 54), Oleate of Morphia (see Morphia, p. 176), and Oleate of Veratria (see Veratria, p. 260), are used medicinally. One part of Quinine (alkaloid) is dissolved by 3 of Oleic Acid forming **Oleatum Quiniæ,** which is applied externally and is readily absorbed, and 8 grains (=2 grains of Quinine) added to one ounce of cod-liver oil forms Oleum Morrhuæ cum Quiniâ. Oleic Acid, although a derivative of oils, is much more readily absorbed by the skin than oils. It also aids the absorption of drugs with which it is combined.

Preparations.

Oleanodyne.

A special preparation combining the alkaloids aconitia, atropia, morphia, and veratria, with oleic acid. It is rapidly absorbed, and forms a strong anodyne liniment, which can be diluted with chloroform, rectified spirit, or oils. It is not so compatible with compound camphor or soap liniment.

Cupri Oleas.

Is best prepared by the double decomposition of a hot solution of sulphate of copper, 3 in 8 of water, added to a hot solution of Castile soap 8 in 32, washing and drying the pasty precipitate. When cold it is in solid dark-green masses. It is in reality an oleo-palmitate of copper; may be employed as a plaster for warts and corns.

Unguentum Cupri Oleatis.

Oleate of Copper	1 ounce.
Petroleum Cerate (p. 135)...	4 ounces.

Melt and stir till cold. A softer ointment may be made by using vaseline as the basis, and for some purposes it may be employed half the above strength.

Is specially useful in ringworm—lightly rubbed in night and morning,—for indolent ulcers, warts and corns, and is recommended for removing freckles.—M.R. 1882,449; P.J. 1882,303; L. i./83,250.

Oleatum Hydrargyri, 5 per cent.

Yellow Oxide of Mercury...	1 drachm.
Oleic Acid	20 drachms.

To the acid, kept agitated in a mortar, sprinkle in the oxide gradually, and stir frequently during 24 hours, until the latter is all dissolved and a light brown semi-oleaginous liquid is formed.

Oleatum Hydrargyri (5 per cent.) **cum Morphiâ, U.C.H.; B.O.H.; T.H.**

Pure morphia, one grain, is dissolved in a drachm of the above.

Oleatum Hydrargyri (10 per cent. and 20 per cent.), **U.C.H.,**

Are prepared respectively with twice and four times as much oxide as the 5 per cent., and when ordered with morphia 1 grain is added to each drachm of the oleate when dispensed. These preparations do not keep well with the morphia in combination. The 10 per cent. is always dispensed unless one of the others is specially ordered. It is the official Oleatum Hydrargyrum, U.S. These oleates should be applied with a brush, or lightly spread over the part with the finger, and covered with a linen rag or silk handkerchief; otherwise, if used with much friction, they may cause some cutaneous irritation. The addition of morphia is indicated where there is pain in the part, or the simple oleate itself causes much pain. The case and the age of the patient will indicate which strength of oleate should be used. As a rule, according to the size of the part affected, 10 to3 drops, or a piece from the size of a bean to a nut, should be rubbed in twice a day for 4 or 5 days, then at night only, afterwards every other day till cured. The application does not salivate unless used in excessive quantity. In persistent inflammation, especially of glands, and joints (such as synovitis), and in non-ulcerated syphiloderma, the Oleates of Mercury are much more active, definite, and cleanly, than the mercurial ointment, which is dirty and uncertain.—L. i./72,709.

In syphilitic affections it is most serviceable, being a certain and less disagreeable cutaneous application than ointments, and really hastens the subsidence of papules and other disfigurements of exposed parts of the skin; is also a very effective parasiticide in pediculi.—Pr. x.204.

Cases of ringworm, one on scalp, cured by 10 per cent. Oleate. It is a certain, painless remedy, produces no stain, and it destroys the fungus, as it readily permeates the sebaceous glands, hair follicles, and even the hairs themselves. Its penetrating power may be increased by adding one-eighth of ether.—L. ii./73,227.

Ringworm of scalp—the most inveterate cases which had existed for years cured by Oleate of Mercury, 5 per cent. for under 8 years, 10 per cent. for over that age; one-seventh of acetic ether added to it, increases its penetrating power, causes little pain, very often none.—L. i./80,126.

An Oleo-Palmitate of Mercury may be made by the double decomposition of perchloride of mercury and Castile soap. It is an opaque, yellowish, viscid unctuous body, about twice the strength in mercury of the 20 per cent. preparation made by direct combination. It is recommended to be diluted with from 1 to 3 or more parts of an unctuous petroleum such as vaseline for use. It is not a satisfactory pharmaceutical preparation.

Emplastrum Hydrargyri Oleatis.

Lead Plaster	6 ounces.
Melt and add	
Oleo-Palmitate of Mercury	2 ounces.

Mix. Is a useful substitute for mercurial plaster, and for strapping up joints requiring the constant application of Oleate of Mercury.

Oleatum Plumbi.

Lead Plaster, B.P., is a crude Oleate of Lead, made by the combination of olive oil (oleate and palmitate of glyceryl) and oxide of lead heated together in the presence of water. Thus made, the oleate possesses more adhesiveness than when prepared by the oleic acid solution of the oxide. Yet an ointment made by the latter process has been used in skin diseases as follows :—

Unguentum Plumbi Oleati.

Litharge in powder ...	3 ounces.
Oleic Acid	9 ounces.

Heat gently till dissolved, and add of

Petroleum, heavy inodorous.	6 ounces.

Mix, and stir till cold. Soon becomes rancid.—Pr. xxxiii. 348.

It has been suggested to make oleate of lead, like the oleo-palmitate of mercury, by the double decomposition of Castile soap and solution of subacetate of lead.—P.J., 1881, 457.

The preparation of lead so obtained is free from glycerine, but cannot be reduced to powder like the oleate of zinc prepared in this way, yet **Pulvis Plumbi Oleatis Compositus** is prepared, consisting of this oleate 1 part with 4 parts of starch.

Plumbi Stearas.

This can be prepared by adding solution of subacetate of lead 2, diluted with boiling water, to a hot solution of curd soap, 1 in 8 of distilled water, washing the pasty precipitate, drying and reducing to powder. It is a white, or almost white, powder, and may be employed as a dusting powder to allay itching of the skin, acute and chronic eczema—is better diluted with kaolin or starch, 1 to 2 or 4 of latter powders, or a mixture of them.

The following ointment was largely prescribed by the Viennese skin physician, Hebra, as a remedy for eczema, excessive perspiration of the feet, &c. It is in reality an oleate of lead ointment.

Unguentum Diachyli (original formula).

Olive Oil	15 ounces.
Boiling water	32 ounces.

Heat, and add gradually,

Litharge in powder... ...	3½ ounces.

Continue the heat, adding more water if necessary, and stir constantly till combined, and while cooling.

When cold stir in

Oil of Lavender	2 drachms.

In cold weather an extra ounce of oil should be allowed for every pound of ointment. It should be rubbed in 1 to 3 times a day, or spread on linen and applied as a plaster.

The author modified this as

Unguentum Plumbi, U.C.H.

Adopted as **Unguentum Diachyli,** P.G. 1882.

Lead Plaster	½ ounce.
Olive Oil (by weight) ...	½ ounce.

Melt together. But, as both the above are prone to become rancid, he further, in 1875, modified it, when he introduced vaseline to the medical profession, by suggesting its being made as follows:—

Unguentum Diachyli, B.S.H.

Lead Plaster Vaseline	of each ½ ounce.

Melt together and stir till cold. Made thus, the ointment keeps well, and does not acquire a disagreeable odour. Kaposi (son-in-law of Hebra) has adopted this, when perfumed with oil of bergamot, as *Unguentum Vaselini Plumbicum.*—Pr. xxii.124; Br. i./79,lix.

Oleatum Zinci.

Oxide of Zinc	1 ounce.
Oleic Acid	8 ounces.

Mix and heat together till combined.

Chartazinc.

Tissue paper impregnated with oleate of zinc; this hastens the healing process and is a healthy stimulant to chronic ulcers, especially those of long standing, and large sores left after burns.—B.M.J. ii./78,691.

Unguentum Zinci Oleati, B.O.H.

Oleate of Zinc Vaseline	of each 1 ounce.

Melt together and stir till cold. For some cases further dilution with vaseline is advisable. This ointment, having the zinc in solution, has the advantage over zinc ointment B.P., in most cases in which the use of this is indicated, in not coating the sore, to which it is applied, with a crust of débris, which checks healing and irritates the part on removal.

Chronic eczema, cases of, cured by above ointment.—B.M.J. ii./78,622; B.M.J. i./79,652.

Further, found useful in eczema; one drop of otto of rose covers its faint smell.—B.M.J. i./79,586.

When required to be spread on lint or rag, the following harder ointment is preferred; it does not liquefy or ooze through the dressing and grease the patient's clothes; as it sticks more firmly to the dressing than to the skin, on removal, the wound or sore is left free from any adhering ointment, &c., but it is not adapted for smearing on a sore.

Unguentum Zinci Oleati Durum.

Oleate of Zinc Petroleum Cerate (p. 135)	of each 1 ounce.

Melt together and stir till cold.

The Metallic Oleates may be made by the double decomposition of a soluble metallic salt and Castille soap (as oleate of copper, p. 188). Thus made, the Oleates contain no free oleic acid, but they are more contaminated by palmitates than if prepared by direct combination of the oxide with free oleic acid. A zinc preparation of this kind is prepared as follows:—

Pulvis Zinci Oleatis.

Castille Soap	1 lb.
Boiling Water	6 pints.

Apply heat till dissolved.

Sulphate of Zinc	7 ounces.
Boiling Water	16 ounces.

Dissolve and add to above solution; stir well, separate the water from the Oleate floating on the top, and wash the latter with hot water till free from sulphate, then cool, dry, and reduce to fine powder, which resembles powdered French chalk in appearance. Useful for dusting on eczematous surfaces and parts troubled with excessive perspiration. It may be perfumed by the addition of $\frac{1}{500}$ of thymol, and diluted with kaolin or starch. It is *the* remedy for hyperidrosis and osmidrosis. — L. i./82,974; M.R. 1882,449.

OLEUM GYNOCARDIÆ.
Chaulmoogra Oil.

Dose.—2 to 15 grains, filled into empty capsules or in cod-liver oil or milk.

The oil expressed from the seeds of *Gynocardia odorata*, imported from India. It has a pale brownish colour and a disagreeable taste and smell. It is always solid and unctuous in this climate, as it contains a quantity of palmitic acid, with three other fatty acids; of these **Gynocardic Acid** is supposed to be the active ingredient of the oil. *Dose:*—½ to 3 grains. It is applied externally, and given internally *after meals* for leprosy, phthisis, and scrofula, marasmus, psoriasis and lupus. For chronic rheumatism and rheumatic gout it forms a useful application with gentle friction. For phthisis 2 to 4 ounces should be rubbed into the chest weekly.—B.M.J. i./81,475,559; i./79,431,968; B.M.J. ii./80,844. Pr. xxi.321; B.M.J. Pr. xxii.241.

In old standing eczema, with thickening of the skin, applied pure or as an ointment was useful.—Pr. xxvi.55.

Unguentum Gynocardiæ, Chaulmoogra Ointment.

Chaulmoogra Oil	1 ounce.
Petroleum Cerate	3 ounces.

Melt and stir till cold.

OLEUM SANTALI.

Oil of Sandalwood.

Syn.—Oleum Santali Flavi, Yellow Santal Oil.

Dose.—10 to 30 minims.

The oil distilled from the wood of *Santalum album*. A yellowish liquid, with a somewhat roseate odour, and an aromatic bitterish, slightly acrid taste. Has been employed in the treatment of gonorrhœa and gleet.

It quickly checks the discharge in dose of 15 minims 3 times a day.—Pr. xxvii.440.

In 100 cases of gonorrhœa employed with satisfactory results.—Glasgow Med. Jour., April, 1865.

In 19 cases of gleet, 13 with marked benefit; in 6 it failed; but in 4 of the latter the stomach could not bear the full dose.—B.M.J. ii./67,7.

Taken internally in conjunction with the use of iodoform and eucalyptus bougies, with success.—L. ii./82,215.

Capsules of Santal Oil are prepared, containing 10 minims in each, or it may be administered as an emulsion, *e.g.*

Mistura Olei Santali.

Oil of Sandalwood	...	2 drachms.
Tragacanth, in powder	...	30 grains.

Mix. Add quickly

Water to	...	8 ounces.

Shake well. Aromatic water or syrup may be used.
Dose.—One ounce.

PANCREAS.

In the pancreatic juice of man four distinct digestive ferments are believed to be contained, viz.:—

a. Trypsin—changes proteids into peptones in alkaline and neutral media.

b. Curdling Ferment—curdles the casein of milk.

c. Pancreatic Diastase—changes starch into sugar and dextrin.

d. Emulsive Ferment—emulsifies and partially saponifies fats.

B.M.J. ii./79,683; B.M.J. i./80,540.

For invalids, aged persons, and those suffering from weak digestion, or those prostrated by fever or exhaustion, preparations of the pancreas of the pig (an omnivorous animal) may be employed, by means of which food may be partially or wholly digested previous to administration; their nutrition is thus maintained, and the stomach has time to regain its wonted powers of digestion.

Pancreatine.

Dose.—2 to 4 grains. Sold in bottles with a dose measure.

A desiccated preparation of the Pancreas, mixed with powdered malt. It is very hygroscopic, and if carefully prepared contains the active principles of the Pancreas.—Proc. Roy. Soc. xvi.209; B.M.J. ii./80,841.

Liquor Pancreaticus (Benger's).

Is made by treating 1 part of the pancreatic tissue of the pig with a mixture of 1 part of rectified spirit and 3 parts of water, and filtering the liquor.—Proc. Roy. Soc. xxxii.145.

This solution possesses the amylolytic or diastasic properties of converting starch into dextrin and sugar (maltose and dextrose), and the proteolytic or tryptic action of converting albumen and fibrin into peptones, and of first curdling and then peptonising milk.

Dose.—1 to 2 drachms in a little water with meals; or mixed with food, such as farinaceous gruels, bread-and-milk, or arrowroot, when cool enough to sip; or, when given to aid intestinal digestion, 1 or 2 drachms in water with a pinch of bicarbonate of soda 2 or 3 hours after a meal. As an addition to nutritive enemata, a dessertspoonful should be added to beef tea or milk gruel just before its administration. Liquor Pancreaticus will not keep diluted and a temperature much over 140° F. destroys the ferment, which does not act in an acid medium.—B.M.J. ii./79,683,724; B.M.J. i./80,539,575, 614,647,683; L. i./80,513,549,589,629,705,753,827.

Peptonised Milk.

Dilute a pint of milk with a quarter of a pint of water, and heat to a lukewarm temperature, about 140° F. (or the diluted milk may be divided into two equal portions, one of which may be heated to the boiling point and then added to the cold portion, the mixture will then be of the required temperature). Add two teaspoonfuls of Liquor Pancreaticus, with a pinch of bicarbonate of soda. Pour the mixture into a covered jug and place in a warm situation. At the end of an hour or an hour and a half, or when not more than slightly bitter, boil the product. It can then be used like ordinary milk.

Peptonised Beef Jelly. Sold in tins.

An extract of beef containing much of the fibrin converted into peptone or partially digested by pancreatic trypsin. May be taken by teaspoonfuls as a restorative, or added to soups, &c.—Trans. Med. Congress, 1881, i. 517.

A **Saline** and a **Neutral Essence of Pancreatine** are prepared by Savory & Moore. *Dose* of each, 1 to 2 drachms diluted. The Neutral Essence has properties like Liquor Pancreaticus, and the Saline Essence is prepared with common salt.—B.M.J. i./80,438,473,512.

Pancreatic Emulsion.

Prepared by mixing and pounding the pancreas of the pig with lard and water, straining, and exhausting the strained substance with ether. The ether forms a solution of pancreatised fat. From this the ether is distilled, and the fat mixed with a mixture of rectified spirit and water (1 to 3) and emulsified by agitation. Oil of cloves is added to flavour and preserve it.—Proc. Roy. Soc. xvi.209; L. ii./64,288; L. i./65,620; L. ii./65,534,562; L. ii./66,542.

Dose.—1 to 3 drachms, in a little milk or water, with a little spirit added, if liked, once or twice a day 1 or 2 hours after a meal. Given in consumption and other wasting diseases attended with loss of power to digest and assimilate food, especially where fats and cod-liver oil do not agree with the stomach.

Although the fat is first pancreatised and *then* emulsified, much of the value of the above preparation is due to its containing an animal fat, rich in stearine, in a suitable condition to be readily assimilated. The writer has succeeded in preparing an emulsion of lard, for hospital purposes, by the following formula:—

Emulsio Adipis, Fat Emulsion.

Prepared Lard	15 ounces.
Boiling Distilled Water ...	30 ounces.
Tragacanth, in powder ...	300 grains.
Essential Oil of Almonds ...	15 minims.

Melt the lard, add the tragacanth, and mix. Then pour in the boiling water, and stir with a whisk till nearly cold, add the oil of almonds, mix well, and put into well-corked wide-mouth bottles.

Dose.—1 to 3 drachms, mixed with milk and a little rum added, if liked, once or twice a day after a meal, or early in the morning before breakfast.

Pancreatised Farinaceous Food.—Wheat flour, partially dextrinised by dry cooking, is impregnated with an extract of pancreas; is suitable for infants and invalids; when mixed with milk or milk and water, artificial digestion of the food and milk takes place, which can be checked at any point by boiling. —Trans. Med. Congress, 1881, i.517; L. i./82,489.

PAPAVERINA.

Papaverine.

Dose.—$\frac{1}{12}$ to $\frac{1}{3}$ of a grain.

An alkaloid from opium, does not readily form salts with acids, is in colourless acicular crystals, insoluble in water, sparingly soluble in spirit, soluble in ether.

Reference.

Said to be a strong narcotic, without producing previous excitement or being followed by headache or giddiness. It contracts the pupil, when it causes sleep and reduces the frequency of the pulse from 20 to 30 beats.—R.

PAPAYOTIN.

Syn.—PAPAIN.

Dose.—1 to 8 grains suspended in water.

A white or whitish amorphous, slightly granular powder, prepared from the juice of the papaw, *Carica papaya*. It has the property of digesting fibrin like pepsin, and its action is not checked by the presence of carbolic acid.—Trans. Med. Congress 1881, i.513. P.J. 1880,250,350.

To remove warts. and chronic eczema and hypertrophied condition of the skin of the palms of the hands, a solution of Papayotine 12 grains, Borax 5 grains, water 2 drachms, painted on twice a day was found curative. Recommended also as a solvent of the false membrane in diphtheria.—B.M.J. i./82, 738,845.

Will peptonise 200 times its own weight of pressed fresh blood fibrine.—M.R. 1882,454.

Paraldehyde.—See Aldehydum, p. 42.

PELLETIERIÆ SULPHAS.
Pelletierine Sulphate.

Dose.—5 to 8 grains.

The sulphate of an alkaloid obtained from Pomegranate Root Bark, *Punica Granatum*, in minute white acicular crystals, freely soluble in water. 5 grains subcutaneously injected is recommended for paralysis, vertigo, Menière's disease, tetanus, and hydrophobia, but mostly used as a remedy for tapeworm; 5 to 8 grains taken fasting, followed by a full dose of compound tincture of jalap, in nine cases out of ten the head is passed; for 13 years, half the above dose, and infants one-tenth.

Pelletieriæ Tannas, Pelletierine Tannate.

Dose.—8 grains.

A greyish white amorphous powder insoluble in water. In tapeworm is an efficient remedy. As a tæniafuge, 8 grains followed in 2 hours by an ounce of castor oil proved an effectual dose, causing neither colic nor headache.—Pr. xxiv.134.

PEPSIN.

Pepsin (*Off.*).

The gastric juice of man is believed to contain two distinct digestive ferments:—

a. Pepsin. This changes proteids (fibrin, albumen, &c.) into peptones in an acid medium. To this the medicinal pepsins principally owe their activity.

b. Curdling ferment, which curdles the casein of milk; this is very active in the stomach of the calf, even when dried: it is contained in the preparations of rennet preserved with common salt, known as essence of rennet.—B.M.J. ii./79,683; B.M.J. i./80,540.

The medicinal preparations of pepsin rarely possess the latter property in an active condition, and their proteolytic or peptonising power is only exerted in an acid mixture.

Pepsin of the pharmacopœia is a light brown yellowish digestive powder, prepared by drying under 100° F. the fresh mucous lining of the stomach of the pig, sheep, or calf. It has a faint, not disagreeable, odour, is little soluble in water or spirit; rubbed with water, it makes a glairy mixture.

Test.—2 grains, with an ounce of distilled water to which 5 minims of hydrochloric acid have been added, form a mixture in which 100 grains of hard-boiled white of egg, in thin shavings, will dissolve on their being digested together for about 4 hours at a temperature of 98° F. That prepared from the stomach of the pig is preferred, and known as Pepsina Porci (Beale's).

Dose.—2 to 5 grains, either with or immediately before or after meals, in a pill with glycerine, or wrapped in wet wafer paper, or sprinked between slices of bread and butter. It is not unpalatable sprinkled on meat like pepper.

Pepsina Amylacea, Pepsine Acide Amylacée ou Poudre nutritive of the French.

Dose.—5 to 15 grains. Is prepared with the addition of starch and slightly acidulated with hydrochloric acid.

Pepsina Saccharata.

Dose.—5 to 15 grains. Has sugar of milk added to the mucous substance to assist in its desiccation; it is preferred in the United States.

Glycerinum Pepsinæ Acidum (Bullock's).

Dose.—1 to 2 drachms in water.

Glycerine is a powerful solvent and preservative of the active principles of the gastric juice. The above preparation is a very active solution slightly acidulated with hydrochloric acid.—Pr. xxiv.192.

In diphtheria, used as a solvent for membrane.—L. ii./81,700.

Lactopeptine.

Dose.—10 to 15 grains, after meals.

A special American preparation, recommended for indigestion, said to be composed of Sugar of Milk 320 parts, Pepsin 64; Pancreatine 48, Diastase 4, and Lactic and Hydrochloric Acids, of each 5 fluid parts.

Experiments, showing its power of digesting coagulated egg-albumen was very weak.—Pr. xxiv.192.

Liquor Pepticus (Benger's).

Dose.—1 to 2 drachms in a wineglassful of water with meals.—B.M.J. ii./80,683.

An active solution of the gastric ferments in weak alcohol.

Pepsin-Essenz (Liebreich's).

Dose.—1 to 2 drachms in water after meals.

This preparation contains principally the curdling ferment in diluted glycerine solution; it is weak in proteolytic power.—Pr. xxiv.192.

Peptonised Beef.

A viscid syrupy preparation, having a bitter taste and the odour of extract of beef; prepared by artificially digesting beef by means of acidified fresh gastric juice and concentrating the solution. It is sometimes added to beef tea, but is too unpleasantly bitter to be readily taken by patients. It forms a useful nutritive enema.

Pepsin Tablets.

Dose.—1 or 2 with meals.

These have 3 grains of pepsin in each in combinatio with chocolate, they are portable and palatable.

Peptonised Beef Suppositories.

Contain about 50 grains of the last preparation in each, with addition of isinglass. As much as 2 ounces of proteid can be administered daily by this means.—B.M.J. i./81,271; B.M.J. i./82,421,459.

Vinum Pepsinæ (Morson's).

Dose.—1 to 2 drachms, with meals.

A solution of the gastric ferments in light Spanish wine.

PHOSPHORUS.

Phosphorus (*Off.*).

Dose.—$\frac{1}{200}$ to $\frac{1}{30}$ grain, carefully increased.

This transparent, colourless metalloid, brittle at low, soft and flexible at common, temperatures, melts at 110°, ignites in the air at a slightly greater heat, and forms dense white fumes of phosphoric anhydride. At low temperatures it emits white vapours of phosphorous anhydride. It is insoluble in water, soluble 1 in 320 of absolute alcohol, about 1 in 150 (=1 in 205 by measure) of absolute ether, 1 in 100 of chloroform, 1 in 100 of Dutch liquid (this takes up much more if warmed), about 1 in 100 respectively of almond, olive, castor, and theobroma oils, suet, and most fixed oils and fats; soluble in melted resins (? not unchanged in some); freely soluble in bisulphide of carbon; soluble also in, or rather combines chemically with, oils of turpentine and peppermint, forming non-luminous and comparatively non-poisonous liquids. These, as well as other essential oils, are incompatible with Phosphorus. French Oil of Turpentine is considered its best antidote—30 minims every half-hour.

Uncombined Phosphorus is a violent poison, and is a much more energetic medicine than an equivalent quantity of any of its chemical compounds. To obtain its full medicinal and certain action, and ensure its complete absorption, it should be administered in solution—either in oil or fat is most reliable. But its solutions, if liquid, are unpleasant to take and cause disagreeable eructations. Many are unstable, as on exposure to the air they rapidly oxidise and form almost inert compounds. It is a difficult pharmaceutical problem to present it in an active and palatable condition.

The French perles or globules of phosphorated oil are stable and active, only the dose contained in them is overstated. Solutions of Phosphorus in oil of theobroma or suet make active pills, if these are coated with sandarach solution, and not kept too long. But the tendency now is to prescribe all the tonics of the pharmacopœia in conjunction with it and expect them to combine and form one small stable and active pill. All the preparations of Phosphorus require skill and care, else much of the Phosphorus is spent or oxidised during manipulation. In making it into pills, this may be partially checked by dropping a minim or two of chloroform into the mortar, the vapour of which checks the luminosity of Phosphorus.

Phosphorus is a nervine tonic and stimulant—given for nervous prostration, paralysis agitans, locomotor ataxy and impotence. It is most useful in neuralgia—especially in aged persons, in leucocythæmia, and in some skin diseases. In psoriasis, chronic eczema, and lichen, it acts somewhat like its chemical ally, arsenic.

Amorphous or **Red Phosphorus.**

Dose.—(?) 1 grain.

An allotropic condition of Phosphorus is obtained by a prolonged heating of it at a temperature of 464° F. without access of air. It is a red powder, insoluble in the simple solvents that dissolve ordinary Phosphorus. It might be administered in a pill, first triturated with sugar of milk and massed with glycerine of tragacanth, but it is unsafe, and not used medicinally. If perfectly free from white Phosphorus, which constitutes its danger, it appears to be physiologically and therapeutically inert. Half-drachm doses were taken 3 times a day for 40 days without apparent effect.—P.J. 1875,41.

Preparations.

N.B.—All preparations of Phosphorus required to be kept from the light and in a cool place.

Alcoholic Solutions of **Phosphorus** have been employed medicinally; but, as it requires 320 parts of cold and 180 of boiling absolute alcohol to dissolve it, and even in this quantity solution is difficult, and as on addition to water the Phosphorus is all precipitated, such solutions are unsatisfactory, uncertain, and give deceptive results.—Pr. xi.19; P.J. 1873,452.

Æther Phosphoratus, Teinture Ethérée de Phosphore (Codex, 1839).

Phosphorus in small pieces 4 parts.
Pure Ether, Sp. Gr. 720 (by weight) ... ... 200 parts.

Macerate with frequent shaking in a dark place for a month and decant. About one-third of the phosphorus only is dissolved, it contains 1 in 150 (or 205 by measure). *Dose.*—1 to 10 minims.

In neuralgia, 5-minim doses effected a cure, taken on the advent of an attack and repeated as required.—L. ii./72,690.

In neuralgia, 1 minim doses useful.—B.M.J. ii./78,975; B.M.J. i./79,176.

Elixir Phosphori.

Compound Tincture of Phosphorus (see p. 205) ... 1 drachm.
Add to
Glycerine ... ... 4 drachms.
And shake well.

Dose.—15 minims to 1 drachm in water. Contains $\frac{1}{30}$ grain in one drachm. As a fluid form of Phosphorus this is stable, palatable, and is well borne by the stomach.

Oleum Phosphoratum (*Off.*).

Dose.—1 to 10 minims, on sugar or in perles.

Contains 1 grain Phosphorus in 160 minims of prepared almond oil; it is not saturated as the corresponding preparation in the Paris Codex is, in which 1 in 50 is ordered, but only 1 per cent is dissolved. It is phosphorescent in the dark.

Perles of Phosphorated Oil.

These are imported from France of two strengths represented as equal to $\frac{1}{32}$ and $\frac{1}{64}$ grain in each, but the dose is over-stated, as the author, on exhausting with ether a number of those said to contain $\frac{1}{32}$ grain, found that, supposing the oil they contained to be saturated, each perle could only contain $\frac{1}{39}$ grain Phosphorus.

Phosphorated Cod Liver Oil.

Dose.—1 to 4 drachms.

Is prepared by adding 256 minims of Phosphorated Oil B.P. to a pint of cod liver oil. It contains $\frac{1}{100}$ grain in one drachm. It is a very unstable and unpalatable preparation.—P.J. 1877, 694,712.748.

Pilula Phosphori (*Off.*).

Dose.—3 to 6 grains.

This is a mixture of balsam of tolu, yellow wax, and Phosphorus 1 in 91 of the mass. It makes unsatisfactory pills. The author found that when swallowed they were passed undigested.—P.J. 1874,902. He has been in the habit of preparing phosphorus pills with the oil of theobroma solution of Phosphorus devised by him, as follows:—P.J. 1870,414; L. ii./76,705; B.M.J. ii./76,641.

Pilula Phosphori (Martindale).

Dose.—1 to 3 grains.

Phosphorus	12 grains.
Oil of Theobroma ...	*q.s.*

Heat the oil to 300° F. and sustain the heat for 5 minutes. Strain and weigh 1200 grains into a wide-necked bottle with an indiarubber cork, and when cooled to 130° F. add the Phosphorus, cork and shake well till the fat begins to solidify. In rolling it into pills, divide into suitable lots, and beat each in a mortar to render it plastic before applying it to the machine, then work off quickly and cover with sandarach solution. The mass contains 1 per cent. of Phosphorus in perfect solution. It should be kept from the light.

When Phosphorus is to be combined with other ingredients in a pill, a more concentrated fatty basis is to be preferred. The following will contain about 10 per cent. of Phosphorus:—

Phosphorated Suet, 10 per cent.

Phosphorus	10 grains.
Bisulphide of Carbon ...	50 minims.

Dissolve and add

Prepared Suet	90 grains.

Add a little of the suet at first, mix quickly, add the remainder, mix thoroughly and allow the bisulphide to evaporate. This basis may be used to make the following pills, the formulæ of which are much advertised.

Dose of each, one directly after meals.

Pilula Phosphori ($\frac{1}{50}$ gr.) **cum Ferro** (3 grs.).

Phosphorated Suet... ...	10 grains.
Reduced Iron	150 grains.
Compound Tragacanth Powder	10 grains.
Chloroform...	15 minims.

Mix, and add quickly

Mucilage of Acacia *q.s.*

Mix, and divide into 50 pills. Cover with sandarach solution. The chloroform prevents phosphorescence and oxidation.

Pilula Phosphori ($\frac{1}{50}$ gr.) **cum Ferro** (3 grs.) **et Nuce Vomicâ** ($\frac{1}{3}$ gr.).

Make as last, adding $\frac{1}{3}$ grain Extract of Nux Vomica to each.

Pilula Phosphori ($\frac{1}{50}$ gr.) **cum Quiniâ** (1 gr.).

Phosphorated Suet... ...	10 grains.
Quinia, pure (= 50 grs. Sulphate)	38 grains.
Chloroform...	20 minims.

Mix quickly, and add

Compound Tragacanth Powder	10 grains.
Mucilage of Acacia... ...	*q.s.*

Mix, and divide into 50 pills. Cover with sandarach solution.

Pilula Phosphori ($\frac{1}{50}$ gr.) **cum Quiniâ** ($\frac{1}{2}$ gr.) **et Ferro** (3 gr.).

Make as last, using half the quantity of quinine there ordered, and adding 3 grains Reduced Iron to each pill.

Pilula Phosphori ($\frac{1}{50}$ gr.) **cum Quiniâ** ($\frac{1}{2}$ gr.), **Ferro** (3 grs.), **et Strychniâ** ($\frac{1}{40}$ gr.).

Prepare as the former pills, adding the proportionate quantity of strychnia.

Tinctura Phosphori Composita.

Dose.—3 to 12 drops on sugar.

Phosphorus...	3 grains.
Chloroform...	5 drachms.

Warm gently in a stoppered bottle till dissolved, and add the solution to

Absolute Alcohol	25 drachms.

Shake well and keep in the dark. Contains 1 in 600.

Zinci Phosphidum, Phosphide of Zinc.

Dose.—$\frac{1}{20}$ to $\frac{1}{3}$ grain.

A steel grey crystalline powder, of which about one-fourth of its weight is Phosphorus, but it has only about one-eighth the medicinal activity of the latter. It has been used in medicine as a form of administering Phosphorus. It is stable, not oxidised by trituration, and can readily be formed into pills by levigation with sugar of milk and glycerine of tragacanth.

Pilula Zinci Phosphidi.

One-sixth of a grain in each, prepared as above.

References to Phosphorus.

Relieves epileptiform vertigo, nervous break-down, anæmia, and neuralgia.—Pr. x.230.

For neuralgia, tic douloureux and hemicrania, frequent doses of $\frac{1}{30}$ to $\frac{1}{30}$ grain useful.—M.T.G. i./73,412.

Use in angina, essential or pernicious anæmia, and leucocythæmia.—Pr. xix.16.

Psoriasis, rapid cure by.—L. ii./76,877.

Use in leucocythæmia, debates and notes on.—L. ii./76,786,799,858,868.

Letters on pharmaceutical preparations of, recommending pills with oil of theobroma.—L. ii./76,705; B.M.J. ii./76,641; B.M.J. i./79,103,257,378,614.

Poisoning by phosphorus rat poison with recovery, treated with milk, solution of morphia and opium, and an enema of castor oil and opium.—L. i./80,644.

Phosphorus useful as a preventive of congenital malformation.—B.M.J. ii./80,802.

Two cases of lymphadenoma, showing the hæmatinic influence of Phosphorus. In one, during 5 months' treatment, the red-blood corpuscles increased from 52 to 76 per cent.; in the other, from 62 to 80 per cent. in 31 days.—Pr. xxi.1.

In toxic doses given to fowls, Phosphorus causes an extreme diminution of the red-blood corpuscles, which in one case fell to one-sixth of the original number, with a great decrease of metabolism.—L. i./81,887.

The **Hypophosphites** of **Ammonium, Calcium, Iron, Potassium,** and **Sodium,** being salts which have their Phosphorus in weak chemical combination, are considered as possessing somewhat similar therapeutic properties to Phosphorus. They, like Phosphorus itself, can all be readily ignited when brought in contact with a naked flame. These salts have been much used as nervine tonics, and are specially serviceable in the incipient stages of phthisis, where there is little tendency to hæmorrhage,—the lime-salt is particularly useful in checking night-sweats. They are also valuable in the treatment of acne.

Ammonii Hypophosphis.

Dose.—1 to 6 grains.

In white deliquescent tabular crystals, soluble 1 in 2 of water. It has a nauseous saline taste.

Calcis Hypophosphis (*Off.*).

Dose.—1 to 6 (or 10, B.P.) grains.

A white crystalline salt, with a pearly lustre and a bitter, nauseous taste, soluble 1 in 7 of water. It is prepared by heating phosphorus with milk of lime until phosphoretted hydrogen ceases to be given off, then filtering and evaporating to crystallize. The other salts are generally prepared from this by the double decomposition of the carbonates or sulphates of their bases.

Ferri Hypophosphis.

Syn.—FERROUS HYPOPHOSPHITE.

Dose.—1 to 5 grains in a pill with syrup.

In commerce is a light brown amorphous powder with a chalybeate taste, soluble almost entirely 1 in 8 of water.

Liquor Ferri Hypophosphitis Compositus.

Ferrous Hypophosphite	2·77
Calcium Hypophosphite	3·5
Sodium Hypophosphite	3·5
Magnesium Hypophosphite ...	1·99
Hypophosphorous Acid	1·66
Distilled Water	86·58
	100

Dose.—One drachm for children of 10 years.

Is best prepared by decomposing the sulphates of iron, sodium, and magnesium, with an excess of hypophosphite of calcium, adding the requisite quantity of the latter and the acid afterwards as described in P.J. 1882,603.

Forms a much more useful "chemical food" for children than Parrish's preparation. Best administered in raisin wine, or for adults in Carlowitz.—B.M.J. i/80,472.

Syrupus Ferri Hypophosphitis.

Hypophosphite of Lime	75 grains.
Water	1 ounce.
Hypophosphorous Acid, Sp. Gr. 1·136	4 drs.

Heat, dissolve and add

Granulated Sulphate of Iron ...	120 grains.

Filter and wash precipitate with distilled water *q.s.* to produce 2 ounces of filtrate; this add to

Syrup	14 ounces.

Dose.—1 drachm, contains a grain of ferrous hypophosphite.

Pilula Ferri Hypophosphitis cum Strychniâ.

Strychnia, $\frac{1}{80}$ grain. Hypophosphite of Iron, 2 grains.
Syrup ... ... *q.s.*
To make a pill. *Dose.*—1 twice or thrice daily.

Potassii Hypophosphis.

Dose.—1 to 6 grains.

A deliquescent granular white powder, having a nauseous, bitter taste. Soluble 1 in 1 of water.

Sodæ Hypophosphis (*Off.*).

Dose.—1 to 6 (or 10 B.P.) grains.

A white granular deliquescent salt, with a bitter, nauseous taste. Soluble 1 in less than 2 of water.

Syrups are prepared respectively of the Hypophosphites* of Calcium, Iron, and Sodium, which, although varying in strength as prepared by different makers, generally contain one grain of the salt in a drachm of the syrup, the doses of which are 1 to 2 drachms. Various compound syrups, liquors, and wines of the hypophosphites besides are prescribed, of which Liquor Ferri Hypophosphitis Compositus is most in use. See p. 207.—B.M.J. i./80,472; P.J. 1882,603.

In phthisis and like cases, hypophosphites raise the nervous power and improve the condition of the secretions.—L. i./61,518.

Phthisis, 12 cases treated with hypophosphites; result apparently nil.—L. i./63.463.

They act as respiratory excitants, expand the chest, increase animal heat and nervous force, remove erratic pains, increase appetite and check night-sweats—M.T.G.i./71,162

Phthisis, 57 out of 100 cases improved under their use. Considered the best general tonics in incipient consumption and in the more advanced stages when the progress of the disease has been arrested.—L. ii./79,811, 344. Further remarks.—B.M.J. ii./82,11.

***Syr. Hypophos. Comp.**

The following formula has been published, based on an analysis, the product much resembles the advertised preparation:—Pyrophosphate of Iron (Ammonio-citro-ferric Pyrophosphate), 15 grains; Hypophosphite of Sodium, 45 grains; Strychnia (dissolved with a drop or two of diluted Sulphuric Acid), $\frac{1}{4}$ grain; Sulphate of Manganese; 15 grains; Sulphate of Quinine, 5 grains; Distilled water, 1 ounce. Heat gently to dissolve, without further addition of acid, and add to Syrup q.s. to weigh 16 ounces. *Dose.*—One teaspoonful.

In infantile diseases the use of the mixed hypophosphite salts is recommended.—B.M.J. i./80,472.

Wheat - Phosphates, Saccharated, the soluble part of bran—the organic phosphates and cerealin (ferment of bran) combined with sugar of milk—is specially useful in weakly and rickety children, and where digestion is impaired it seems to aid the assimilation of food and even of such medicines as iron.

Dose.—Half a teaspoonful (increased) 2 or 3 times a day, may be taken as sugar with food.

PHYSOSTIGMA.

Calabar Bean (*Off.*).

Dose, in powder.—1 to 4 grains.

The poisonous properties of this drug, chiefly due to **Eserine** (*q.v.*), are said to be contained principally in the integument of the bean of *Physostigma venenosum.*

Preparations of Physostigma and its alkaloid Eserine, applied topically to the eyes, contract the pupil, and are antagonistic to atropine.

For tetanus the dose of extract given by mouth, rectum, or hypodermically, should be repeated, and increased every hour, so as to produce paralysis little short of arresting the breathing. For chorea also it is given in smaller doses. In paralysis it arrests muscular wasting and improves muscular power. In hemiplegia or paraplegia, give doses of $\frac{1}{30}$ to $\frac{1}{10}$ grain frequently.—R

Extractum Physostigmatis (*Off.*).

Dose.—$\frac{1}{16}$ to $\frac{1}{4}$ grain, in a pill with sugar of milk; in cases of tetanus may be given every hour and increased.

This extract, if carefully prepared with alcohol of full strength, is dark brown, soft, and viscid, not miscible with water nor glycerine, but may be emulsified with gum and spirit, as in the following formula.

Injectio Physostigmatis Hypodermica.

Extract of Calabar Bean ... 10 grains.
Rectified Spirit ... ... 10 minims.
Rub together till smooth, and add
Gum Acacia ... ... 10 grains.
Mix, and add gradually
Distilled Water to ... ... ½ ounce.

Dose.—3 to 12 minims.

Traumatic tetanus, cases of, treated with Calabar bean. $\frac{1}{8}$ grain of the extract every hour, then $\frac{1}{6}$ grain every 2 hours, was successful.—L. i./68,434,463.

Antagonistic to strychnia, *not* to be depended on as a remedy for poisoning by.—B.M.J. ii./74,805.

Eseria. Eserine.

Syn.—PHYSOSTIGMINE.

The alkaloid is in large colourless rectangular crystals, slightly soluble in water, soluble 1 in 180 of vaseline.

Eseriæ Hydrobromas, Eserine Hydrobromate.

Dose.—$\frac{1}{60}$ to $\frac{1}{20}$ grain, may be increased to $\frac{1}{12}$ grain.

A whitish amorphous powder, as met with in commerce, slightly hygroscopic, very soluble in water.

Eseriæ Salicylas, Eserine Salicylate.

Syn.—PHYSOSTIGMINUM SALICYLICUM, P.G. PHYSOSTIGMINÆ SALICYLAS, U.S.

Dose.—$\frac{1}{60}$ to $\frac{1}{20}$ grain, may be increased to $\frac{1}{12}$ grain.

In colourless, shining, needle-shaped, or short columnar crystals. A stable salt, soluble 1 in 140 of cold water, forming a colourless solution, which becomes red in a few days, but does not lose much in efficacy.

Injectio Eseriæ Salicylatis Hypodermica.

One grain in distilled water *q.s.* to 160 minims.

Dose.—1 to 6 minims. May also be used as eye drops in preference to the solution of the sulphate.

Eseriæ Sulphas, Eserine Sulphate.

Dose.—$\frac{1}{60}$ to $\frac{1}{20}$ grain, increased to $\frac{1}{12}$ grain.

A light brownish amorphous powder, very hygroscopic and soluble in water.

Guttæ Eseriæ, R.O.H.

Sulphate of Eserine	...	2 grains.
Distilled Water ...	...	1 ounce.

Dissolve.

References.

For chorea $\frac{1}{32}$ to $\frac{1}{12}$ grain or more of sulphate hypodermically; also in tetanus.—L. ii./75,187.

For corneal ulcers in scrofula, solution of 2 grains to an ounce dropped into the eye; also in mydriasis and glaucoma.—Pr. xxi.294.

Presbyopia, useful for, $\frac{1}{500}$ to $\frac{1}{200}$ grain in solution dropped into the eye at a time.—M.T.G. i./76,174.

Use of salts as myotics.—B.M.J. ii./79,363.

Acute glaucoma, cases of, cured by 2 or 3 eserine discs applied daily.—B.M.J. ii./81,921.

Use of in glaucoma and ocular neuralgia.—B.M.J. i./82,811.

Use of as a preliminary to extraction in cases of cataract. —B.M.J. ii./82,1293.

Painful corneal ulcers successfully treated with Eserine drops and warmth.—B.M.J. ii./83,864.

In glaucoma Eserine is indicated, in iritis Atropine.—Pr. xxxi.321.

Eserine may also cause glaucoma.—L. i./84,99.

PHYTOLACCIN.

Dose.—1 to 5 grains, in a pill with glycerine of tragacanth.

The powdered extractive, of a pale brown colour, obtained from poke root, *Phytolacca decandra.* Is nauseant and emetic, cathartic and alterative, used in syphilitic and rheumatic affections.

As a hepatic stimulant on the dog has considerable power; it also slightly stimulates the intestinal glands.—B.M.J. ii./78,912; Pr. xxiii.410.

PICROTOXINUM.

Picrotoxin, U.S.

Dose.—$\frac{1}{120}$ to $\frac{1}{20}$ grain.

A neutral crystalline principle obtained from the seeds of *Menispermum Cocculus*—cocculus indicus, in white needles or in laminæ, does not form salts. Soluble, 1 in 240 of water at 60°; freely soluble in glacial acetic acid, alcohol, and caustic alkaline solutions. It requires about 500 parts of olive oil or lard to dissolve it, and 60 parts of glycerine even if heated to 212° F., most of it also crystallizes out on cooling. Taste bitter. It has been used with good results in checking night-sweats, also employed in epilepsy and chronic alcoholism; overdoses cause stupor, delirium, and convulsions. Other principles, Menispermic Acid, Anamirtin, and Cocculin, are stated to be contained in cocculus indicus, and also that Picrotoxin can be split up into two separate principles, Picrotoxinin and Picrotin.

Liquor Picrotoxini Aceticus.

Picrotoxin	8 grains.
Glacial Acetic Acid ...	4 drachms.

Dissolve and add

Distilled Water to	4 ounces.

Filter.

Dose.—2 to 12 minims in water.

Is palatable and keeps in solution at all temperatures.—Pr. xxv.93; B.M.J. i./80,351. For hypodermic injection a simple aqueous solution of Picrotoxin 1 in 240 is best used, but it is difficult to dissolve and apt to crystallize out.

Pigmentum Picrotoxini.

Picrotoxin	8 grains.
Glacial Acetic Acid ...	4 drachms.

Dissolve and add

Castor Oil	4 drachms.
Oil of Eucalyptus	16 minims.

Has been recommended for ringworm of the scalp, but is not so efficacious as Coster's paste and other remedies; the Pigment will bear dilution with castor oil for parasitic skin diseases, destroying pediculi, &c.

Pilula Picrotoxini.

Picrotoxin $\frac{1}{60}$ grain, triturated with sugar of milk and glycerine of tragacanth *q.s.*, to make one pill. Forms a suitable dose for checking night-sweating of phthisis taken for 2 or 3 nights successively, it is slightly cumulative, and may be discontinued and yet its effects last.

References.

Physiological effects.—Edin. Jour. Med. 1861,306.

Epilepsy, useful for, especially when combined with anæmia and when the attacks occur at night.—St. Louis Clin. Rec. Oct. 1876.

Epilepsy and pharyngeal paralysis, good effects of $\frac{1}{25}$ grain by hypodermic injection.—Pr. xvii.369.

Night-sweating of phthisis, 2 to 4 minims of the acetic solution or $\frac{1}{120}$ to $\frac{1}{60}$ grain in pill was very efficient; does not, like atropine or belladonna, produce dryness of the throat, or any unplessant effect.—Pr. xxiii.241.

Antagonism between Picrotoxin and chloral-hydrate; $\frac{1}{50}$ grain sufficient for 30 grains of chloral.—*B* M.J i./75,506,541; L.H. 238.

Periodical sick-headaches $\frac{1}{60}$ to $\frac{1}{20}$ grain by hypodermic injection, or $\frac{1}{30}$ to $\frac{1}{15}$ grain by mouth, and an ointment 10 grains to an ounce, is used for parasitic skin affections—B.

Used in epilepsy, not successful.—L. i./80,553.

Therapeutic uses, in checking night-sweats, &c.—B.M.J. i./80,96.

Letter on its pharmaceutical preparations.—B.M.J. i./80,851.

Pilocarpine.—See p. 163.

PILULÆ.

Pills.

Medicines prepared in a pilular form are very portable, as they can be supplied to the patient in the smallest possible bulk in equally apportioned doses. The pill is a convenient mode of administering nauseous medicines, those that are insoluble in water and not easily suspended in it, and those drugs whose gradual action is required. A pill should be perfectly globular and firm so as not to lose its shape, yet should not be too hard so as to be insoluble, or even slow in dissolving, unless the prescriber wishes it, as is sometimes the case; *e.g.*, 5 grains of dried sulphate of iron with one minim of syrup form a not very large but useful pill, which, by dissolving slowly, does not derange the stomach, whereas an equivalent dose of the salt in solution would, in many cases, act as an emetic. Again, dinner pills of aloes and mastic are prescribed to be made up with spirit by some physicians, who intend them to dissolve, not in the stomach, but in the bowels principally, where their peristaltic action is required. It is the duty of the dispenser not to deviate from using the excipient ordered, unless, for example, a fluid excipient is ordered along with extracts whose normal condition is too soft to begin with. If the choice of the excipient be left to the dispenser, as is often the case, he should choose one which will not be incompatible with, but, if possible, have a preservative action on the other ingredients of the pill, neither inconveniently increase its size nor interfere with the quick or prolonged action intended by the prescriber.

The Pill Mass, in the first place, should be firm and solid, yet possess tenacity and be plastic when worked.

As in building a wall bricks and mortar are required in due proportion, so a good pill mass requires particles void of fluidity, with adhesive, semifluid substance to bind them together. Where there is but little fibrous or insoluble solid particles prescribed, the mass should be made as hard as possible and quickly rolled out, else the pills will not keep their shape. Most vegetable powders contain fibrous matter and have their adhesive properties while dry in a latent condition, these merely require a suitable fluid added to develope their tenacity and enable them to be rolled into pills. As a powerful solvent and preservative, glycerine, diluted with one-half its volume of rectified spirit, used discreetly, is a good excipient for such powders. If used in the pure state in the slightest excess, glycerine, being slightly hygroscopic, causes the pills in time to have an unsightly, moist appearance, whereas, if diluted with spirit, the spirit readily evaporates from them. Glycerine in any form should not be used as an excipient for hygroscopic drugs, such as soft extracts, squills, aloes, &c. For these mucilage of acacia or syrup is preferred. For insoluble metallic salts, glycerine requires additional adhesiveness, for such and a number of other drugs it is best used in the form of glycerine of tragacanth (see p. 259), adding, if necessary, a small quantity of powdered acacia or althæa to give firmness to the pill.

Powders to be formed into pills should be as finely comminuted as possible; any poisonous alkaloid or very active drug should be well triturated with some less active powder, or, if the formula contains no other powder, with a little sugar of milk, before mixing with the other ingredients. Having mixed the powders and diffused any essential oil evenly through them, the extracts and other excipients should be added, the whole well pounded into a mass, rolled into pills, and dusted over with lycopodium, powdered starch, or French chalk, in the usual manner.

But the public now require pills to be made as tasteless and as small as possible. A one-grain pill is much preferred to a 5-grain one; yet, unless specially ordered otherwise, when the ingredients prescribed for each pill weigh less than one grain, it is a rule with dispensers, for uniformity's sake, to triturate the ingredients with sugar of milk and glycerine of tragacanth *q.s.* to make each pill weigh one grain. These excipients, glycerine of tragacanth and sugar of milk, generally are as neutral as any that can be chosen. Pills made with them will remain plastic and active any length of time.

As a means of rendering pills tasteless, silvering or gilding are giving place to covering them with solution of sandarach, gelatine, or pearl-coating them with French chalk and gum, or sugar-coating them.

Varnishing Pills—The writer's plan of, using a sandarach solution — 1 part sandarach in 1 part of absolute alcohol (= Pill Varnish: Pharm. Jour. 1870,414) may be done extemporaneously. The pills should be perfectly made—well mixed, and free from contamination and powder, as every imperfection will show through the transparent coating. Having placed them in a covered pot, a few drops of the sandarach solution are poured in and diffused equally over the pills by a few circular movements of the pot held in one hand. They are then poured out on a clean plate and detached from each other. After 4 minutes each one is moved, and in 10 minutes all are moved and again shaken. In about 20 minutes they will be quite dry, but are better allowed to be exposed to the air an hour or so more.

In **coating** Pills with **Gelatine**, they should be free from powder, and not too dry. A solution is prepared by dissolving 1 part of gelatine in 4 parts of water, straining whilst hot through fine muslin, allowing to cool and re-heating to get rid of air bubbles. The pills are stuck on the points of fine needles and dipped into the solution, kept hot by a water bath; as they are taken out, each needle is slowly revolved to make the coating even on the pill, the reverse end of the needle is then stuck into a sheet of cork or pincushion, and the needles are left in this upright position till the pills are dry, which is usually in about half an hour.

In **pearl-coating** Pills they should be made firm and free from powder; they are first evenly covered with a mucilage of tragacanth 4 grains to 1 ounce, and half a drachm of syrup added; this is done by shaking them in a covered pot with a few drops of the mucilage, they are then thrown into another covered pot having a concave bottom and containing some finely powdered French chalk; after gently rotating them in this for a few seconds they are turned into a third clean and similar pot and rotated slowly; the excess of powder is then blown off, the lid placed on the pot, and they are finished by shaking them quickly and regularly round until they become even and polished.

The **sugar-coating** of Pills is a confectioner's art. It can only be done successfully in large quantities, and the pills must be hard and dry; they are placed in a hemispherical metallic pan kept warm, while making eccentric revolutions, and are alternately moistened with syrup, and dusted with finely-powdered sugar, till dry and uniformly covered.

In all pharmacies it is found convenient to keep a number of pills besides those of B.P. ready prepared. A list of those in general request in London is contained in the index.

PINUS SYLVESTRIS.

Scotch Pine.

Syn.—SCOTCH FIR.

From the wood of this much of the European oleoresin common turpentine, oil of turpentine, and tar is produced. From its leaves also are prepared an extract, volatile oil and wool, at certain establishments in Germany, where a system of treatment of rheumatism and other diseases by baths, &c., known as the **Pine Cure,** is followed.

Fir Wool, or Fir Wool Wadding, is sold as a brownish yellow fibre, in sheets like cotton wool; it has the faint, agreeable odour of the Pine-leaf, and is manufactured into blankets, jackets, spencers, stockings, &c. A Liquor is obtained, which is employed for baths. On evaporation this yields

Extractum Pini Sylvestris. Fir-Wool Extract.

A dark brown liquid of the consistence of treacle, readily soluble in water and having a faint pine odour; 2 to 4 ounces are added to a 30 gallon warm-bath for rheumatism.

Oleum Pini Sylvestris. Fir-Wool Oil.

In the preparation of the wool this is obtained by distillation from the pine-leaf. It is colourless, and has the agreeable odour of the fresh pine-leaf. It has Sp. gr. 0·868. For rheumatism it is applied by rubbing, and the affected part is afterwards covered with warmed Fir-wool wadding; it is also added in quantities of a drachm or more to warm baths for the same disease.*

Vapor Pini Sylvestris, T.H.

Fir-Wool Oil	40 minims.
Light Carbonate of Magnesia	20 grains.
Water, to	1 ounce.

One drachm to a pint of water at 140° F. forms a mild stimulant inhalation in chronic laryngitis.

PIPERINA.

Piperine, U.S.

Dose.—1 to 10 grains.

A crystalline base obtained from black and long pepper, the fruits of *Piper nigrum* and *Piper longum*, in large colourless prisms, which turn yellow with keeping. Insoluble in water, soluble in alcohol, and less soluble in ether. Almost tasteless, but its spirituous solution has a peppery taste. The pungency of pepper is not due to Piperine. It has been used in conjunction with eucalyptol for neuroses and congestion of the spleen.

Febrifuge action is energetic, it neither changes, retards, nor suppresses any secretion or excretion.—M.T.G. ii/60,18.

PISCIDIA.

Jamaica Dogwood.

The bark of the root of this tree, *Piscidia erythrina* is employed in the West Indies to intoxicate fish. In

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* "**Sanitas" Disinfectants** prepared from oil of turpentine, including:—

"**Sanitas" Fluid**, the aqueous solution resulting from the action of water upon air-oxidised turpentine, containing as its active principles peroxide of hydrogen, thymol, a soluble camphor, and some camphoric acid. It is an oxidising agent and an antiseptic, is non-poisonous, does not stain linen, is useful for household disinfection and for surgical operations. Two fluids Nos. 1 and 2 are sold, No. 1 is more concentrated than No. 2. **Toilet "Sanitas"** is similar, with an agreeable perfume. **"Sanitas" Oil** is an air-oxidised turpentine, the oxidation being conducted in the presence of water; it has Sp. gr. 0·95. An organic peroxide is present in it, which gives it an oxidising strength equal to that of a ten-volume solution of peroxide of hydrogen. As an antiseptic it may be mixed with sawdust and sprinkled about, or diluted with alcohol or methylated spirit and sprayed in a room, or diluted 1 to 7·20 of olive oil for various surgical dressings and affections of the skin. Mixed with powdered acacia, then boldly diluted with water and well shaken, it forms a "Sanitas" emulsion which can be diluted further *ad lib.* for various purposes.

America it is employed to relieve toothache, and as a general sedative; it is said to be specially useful in allaying the cough of bronchitis and phthisis; does not interfere with expectoration, or lower the vital force. —P.J. 1844,76,111. It is said to be an effective anodyne substitute for opium, to allay pain, spasm, and nervous excitement, and produce tranquil sleep.

Extractum Piscidiæ Erythrinæ Fluidum.

Dose.—20 minims to 2 drachms.

One drachm equals 1 drachm of the bark. Is a good narcotic, does not cause headache nor constipation.—B.M.J. ii./83,903.

PIX LIQUIDA.

Tar (*Off.*).

Dose.—2 to 10 grains in a pill with lycopodium, or in perles.

Since Bishop Berkeley, and Dickens' "Joe Margery's wife" had such belief in its virtues, when given internally, Tar has comparatively fallen into disuse. Yet, as a diuretic and in bronchial catarrh and winter cough, it is very useful.—B.M.J. ii./75,380,498.

On account of their antiseptic properties, both Wood and Coal Tar and preparations of them have been used for surgical dressings. The former yields Creosote, which is a much more powerful although a less manageable germicide than the carbolic acid or cresylic acid contained in the latter. During the late American war, oakum (old tarred rope carded) was much employed as an absorbent antiseptic wound-dressing; but generally its fibres are too coarse and harsh; yet, under the name of **Tenax,** a fine carded oakum is sold in 1-lb. packets.

Marine Lint, also in 1-lb. packets, is tow impregnated with fresh tar; is a cheap and useful antiseptic dressing.—B.M.J. i./80,476.

Aqua Picis. Tar Water; *Syn.*—Aqua Picea; Eau de Goudron (Codex 1884).

Tar	1.
Pine Sawdust	8.

Mix and add

Distilled Water	200.

Macerate, with frequent shaking, for 24 hours, and filter.

Dose.—5 to 10 ounces.

Oleum Picis Rectificatum. Light Oil of Tar.

Two distilled oils of Wood Tar are met with in commerce, one light, known also as Rectified Spirit of Tar, having Sp. Gr. 0·853 to 0·867, is colourless when fresh, but becomes sherry-coloured with age; this is a most powerful deodoriser, and is used for making Coster's paste (p. 158). The other is an opaque black dense oil, heavier than water.

Perles of Tar.

Dose.—1 or 2. The Tar is enclosed in small globular capsules, containing about 2½ grains in each.

Pilula Picis Liquidæ.

Tar...	2 grains.
Lycopodium	1 grain.

Make a Pill.

Dose.—1 or 2; useful for winter cough.—B.M.J. i./75,498.

Unguentum Picis Liquidæ. Tar Ointment (*Off.*).

Tar 5, Yellow Wax 2.

Useful in psoriasis.

For use in skin diseases 4 special kinds of Tar, imported from Germany, are met with. Unlike common Tar, they are perfectly liquid. They are also known as empyreumatic or pyroligneous oils, viz.:—

Oleum Betulæ Pyroligneum. Birch Tar.

Oleum Cadinum. *Syn.*—Oleum Juniperi Pyroligneum. Juniper Tar. Huile de Cade. Said to be obtained from *Juniperus Oxycedrus.*

Oleum Fagi Pyroligneum. Beech Tar. On the Continent used as a source for creosote.

Oleum Rusci Pyroligneum. Said to be obtained from Butcher's Broom. (This must be distinguished from the *Oleum Rusci,* almost colourless, prepared in Germany by digesting Butcher's Broom in olive oil.) Is really a Birch Tar, identical with the above.

These Tars have similar properties for forming ointments for skin diseases; their odour is less disagreeable, they are cleaner, and they are thought to be more efficacious than common Tar. The Birch Tar is esteemed on account of its peculiar odour well known in Russia leather. Oleum Cadinum (Huile de Cade) is the most used. They are all soluble in oils, fats, wax, unctuous petroleum, and chloroform, but do not perfectly blend with alcohol.

Unguentum Olei Cadini.

Yellow Wax	... ...	1 ounce.
Melt and add		
Huile de Cade	... ...	1 ounce.

Heat gently and stir till cold. Used in psoriasis and dry eczema. Similar ointments may be made of the other Tars, the proportions may be varied and lard may be used as a diluent if a weak ointment be required.

Chronic eczema, 2 cases cured by an ointment of Oil of Cade 1, Vaseline 4.—B.M.J. ii./83,817.

PODOPHYLLIN.

Syn.—Resina Podophylli (*Off.*).

Dose.—$\frac{1}{4}$ to 1 grain as a cholagogue and aperient. $\frac{1}{30}$ to $\frac{1}{15}$ frequently as an alterative.

The resin obtained from the root of *Podophyllum peltatum*—American mandrake, or May apple, sometimes called vegetable mercury, as it is a powerful biliary purgative. It is a pale greenish brown amorphous powder, with an herby odour and acrid taste, soluble in aqueous ammonia, almost entirely soluble in rectified spirit, leaving undissolved inorganic impurity, with, it is said, traces of hydrochlorate of berberine.

The crude resin may be divided by treatment with ether, which dissolves a portion and leaves another which is soluble in alcohol but not in ether. The former has a bright yellow colour, an herby odour, and acrid taste; the latter has a pale brown colour, is odourless, and has a less acrid taste than the other. The author found little difference in their purgative action. The brown resin was more prompt.—Pr. xxviii.54; P.J. 1877,456. The crude resin is a slow and rather uncertain purgative, requiring from 12 to 20 hours to act.

In a later research by Podwissotzki, he obtains from a chloroformic extract of the root an amorphous principle, which is free from the fatty and colouring matters of the official resin. This he names **Podophyllotoxin**; it is more certain in its action than Podophyllin and is given in dose of $\frac{1}{10}$ to $\frac{1}{5}$ grain, to children $\frac{1}{60}$ to $\frac{1}{30}$ grain. It is best administered by dissolving 1 grain in 2 drachms of rectified spirit. Dose, 2 to 10 drops in a teaspoonful of syrup.—P.J. 1882, 623,1011; L. ii./81,568; M.R. 1883,14. **Podophyllotoxin** is in its turn capable of being separable into a bitter crystalline acid (Picropodophyllic Acid), a bitter, crystalline neutral body (Picropodophyllin), the latter of which is the more medicinally active, and an amorphous substance (Podophyllic Acid) which is inert.

Pilula Podophyllin.

$\frac{1}{30}$, $\frac{1}{4}$ or $\frac{1}{2}$ grain of the resin in each, well triturated with sugar of milk and glycerine of tragacanth *q.s.*, to make one pill.

Pilula Podophyllin Composita, U.C.H.

Podophyllin	$\frac{1}{4}$ grain.
Barbadoes Aloes	1 grain.
Capsicum	$\frac{1}{2}$ grain.
Extract of Belladonna	$\frac{1}{4}$ grain.
Glycerine of Tragacanth	*q.s.*

To make one pill. One or two form a biliary aperient dose.

Pilula Podophyllin et Quiniæ.

Sulphate of Quinine	1 grain.
Podophyllin	$\frac{1}{12}$ grain.
Sugar of Milk	$\frac{1}{12}$ grain.
Extract of Belladonna	$\frac{1}{6}$ grain.
Extract of Socotrine Aloes	1 grain.

To make one pill. In making these pills, let the podophyllin be well triturated with the sugar of milk and then with the quinine. They are useful "dinner pills."

Tinctura Podophyllin (Dobell).

Podophyllin	1 grain.
Essence of Ginger	1 drachm.
Rectified Spirit to	1 ounce.

Dose.—A teaspoonful in water at bedtime every, or every 2nd, 3rd, or 4th night, as required, better than in pill; this forms "one of the most satisfactory and reliable of our medicines."—B.M.J. i./79,892.

Tinctura Podophyllin.—R.

Podophyllin	1 grain.
Rectified Spirit	1 drachm.

Dissolve and filter.

Dose.—2 to 4 drops in tea or coffee, taken night and morning, is useful in sick-headache and biliousness, where the bowels and liver are sluggish in worried and over-worked patients, and in chronic diarrhœa with cutting pains and high-coloured motions. Also relieves constipation with clay-coloured motions following diarrhœa of infants, 1 or 2 drops on sugar twice or three times a day.—R. Its taste is acrid and disagreeable.

Tinctura Podophyllin Ammoniata.

Podophyllin	1 grain.
Aromatic Spirit of Ammonia	1 drachm.

Dissolve.

Dose.—2 to 6 minims as an alterative, 10 to 20 minims as a purgative and cholagogue, taken in a wineglassful of water or milk. Good Podophyllin will dissolve perfectly in spirit of sal volatile. This tincture has an advantage over the other tinctures of Podophyllin of forming a solution from which, on addition to water, the resin does not separate. The sal volatile also acts as a corrective.

A powerful hepatic stimulant, and in large doses a violent purgative. It is a very powerful stimulant of the liver of the dog. During the increased secretion of bile, the percentage of the special bile solids is not diminished; if the dose be too large, the secretion of bile is not increased; it is a powerful intestinal irritant.—Pr. xxiii.335 ; B.M.J. Rep. 1878,4 ; B.M.J. i./79,177.

As a purgative for children, 1 grain recommended.—M.T.G. ii./61,520.

By causing vomiting and purgation, 1 grain cured case of convulsions in a child 3 years old.—M.T.G ii./61,626.

Résumé of its medical properties, as a purgative and cholagogue, used in syphilis, rheumatism, and scrofula. —M.T.G. ii./70,647.

POTASSÆ NITRAS.

Nitrate of Potash (*Off.*).

Syn.—NITRE ; NITRATE OF POTASSIUM.

Dose.—5 to 30 grains.

Fumus Potassæ Nitratis (Nitrated Papers), T.H.P. ; Charta Nitrata, P.G.

Nos. I. II. and III. are made by saturating white blotting-paper with solutions of Nitre, 30, 45, or 60 grains respectively in an ounce, and drying. No. III. is the strongest. Burnt to inhale the fumes for asthma.

Asthmatic Pastilles are prepared in cones containing a mixture of chlorate and nitrate of Potassium.

Ozone Papers are similar in composition.

In addition to the above, various powders and cigarettes are sold as nostrums, the fumes of which while burning are employed to relieve attacks of asthma, of which Nitre is a constant and stramonium is generally an ingredient; Himrod's Cure, Bliss's Cure, and the Green Mountain Cure may be imitated by the following:—

Pulvis Lobeliæ Compositus.

Nitrate of Potassium	...	2 ounces.
Boiling Distilled Water	...	2 ounces.

Dissolve and add to

Lobelia, in powder.	2 ounces of each.
Stramonium Leaves, in powder.	
Black Tea, in powder.	

Mix well and dry.

Arsenical Cigarettes are made of paper impregnated with arseniate of soda, so that each contains $\frac{3}{2}$ grain of the salt. The patient ought to inspire the fumes deeply three or four times.—L. ii./81,83.

POTASSÆ PERMANGANAS.

Permanganate of Potash (*Off.*).

Dose.—1 to 5 grains in well-diluted solution, or in pill.

The deoxidising and disinfecting properties of a solution of this salt are well known. The official solution contains 4 grains in an ounce. The **Saturated Solution** 1 in 20 is more convenient for use. It is deep purple, and, when much diluted, crimson. Diluted 500 times makes it suitable for a lotion or gargle, or for pouring down sinks, drains, &c. It has the advantage over other disinfectants in having this distinctive colour, so that it cannot be mistaken for any other medicine; it has no disagreeable odour, and besides being a deodoriser, it quickly disintegrates all fetid and decomposing organic substances and albuminoid bodies whether in a solid form or in solution, living or dead, with which it comes in contact. It destroys bacteria with great rapidity.—Jour. Chem. Soc. xxxix. 258; P.J. 1881,765.

In amenorrhœa, 1 or 2 grains, in a pill 3 or 4 times a day for a few days before the time of the expected period, will bring on the flow almost to a certainty.—L. i./83,7.

In gonorrhœa, solution of ½ grain in 1 ounce recommended as an injection.—L. i./83,45,86.

For counteracting serpents' venom.—L. i./83,768, 967; L. ii./83,461; L. i./84,288.

Pilula Potassæ Permanganatis.

Permanganate of Potash ...	1 grain, or more if ordered.
Kaolin Ointment (p. 167) ...	*q.s.*

To make a pill, care must be taken not to triturate Permanganate of Potash with any easily oxidised substance, like sugar, syrup, or glycerine, else spontaneous combustion may occur. The pills may be coated with sandarach solution and rendered tasteless. A solution of Permanganate of Potash is very nauseous.—L. i./83,81, 107; P.J. 1883,580,600,620.

Permanganate of Soda, in solution, green in colour, is used as a cheap disinfectant, and **Permanganate of Zinc**, in deliquescent dark brown iridescent crystals, like the Potash salt, is used for lotions and injections, where the astringent action of the zinc is indicated. **Permanganate of Lime** is preferred for making mouth lotions, as it has least taste.

Potassium Silicate, solution of.—See Sodium preparations, p. 244.

PRUNUS VIRGINIANA.

Wild Cherry Bark, U.S.

This bark contains amygdaline, and on distillation with water yields an essential oil which is rich in hydrocyanic acid; on simply moistening the bark with water, the odour of the latter is developed. It possesses as well bitter tonic properties, with more or less sedative ones. The preparations in use here—the tincture and syrup—form agreeably flavoured medicines, which are used to palliate the cough in phthisis and bronchitis, and in palpitation of the heart, and debility particularly of the digestive organs.—L. i./80,97.

Preparations.

Syrupus Pruni Virginianæ, U.S.

Wild Cherry Bark, in powder	12
Distilled Water	*q.s.* to moisten.

After 24 hours percolate until 35 of liquid are obtained; to this add

Sugar, in coarse powder ...	60

And dissolve without heat, and add

Glycerine	5

Dose.—1 drachm.

Tinctura Pruni Virginianæ.

Wild Cherry Bark, in powder	8 ounces.
Distilled Water	15 ounces.

Macerate 24 hours and add

Rectified Spirit	25 ounces.

Macerate 7 days more, express and filter, adding proof spirit *q.s.* to produce 2 pints.

Dose.—20 to 60 minims.

Prunin.

Syn.—CERASIN.

Dose.—1 to 5 grains.

Is prepared by evaporating the tincture and powdering the extract. It is pale brown in colour, and has a characteristic odour.

PULSATILLA.

Pulsatilla.

Pulsatilla nigricans or *Anemone pratensis* and *A. Pulsatilla* (these two plants are by some botanists considered varieties of one species) pasque flower, meadow anemone or wind flower.

The flowering herb imported principally from Germany.

Preparations.

Anemonin. **Pulsatilla Camphor.**

Dose.—$\frac{1}{60}$ to $\frac{1}{12}$ grain or more, well triturated with sugar of milk in a pill.

In neutral white volatile prismatic crystals, easily crumbled, sparingly soluble in water or ether, more soluble in alcohol and chloroform. Almost tasteless, but if heated is acrid and irritating. Obtained from *P. nigricans* and other species of anemone. It is poisonous —5 to 10 grains caused death of rabbits. Has been given for dysmenorrhœa and epididymitis.—Pr. xxi.377.

'**Tinctura Pulsatillæ.**

From fresh plant in an equivalent quantity to 1 of dried in 10 of proof spirit.

Dose.—1 to 5 minims, or more, for amenorrhœa or dysmenorrhœa, a minim every hour or two hours, a day or two before periods.

Pulsatilla paralyzes the medulla oblongata and spinal cord, and excites irritation of the digestive tract and the kidneys.—Clarus in Binz.

The tincture is praised as a remedy for spasmodic dysmenorrhœa and amenorrhœa.—Pr. xxi.377.

It is also used in catarrh of the air-passages with spasmodic cough, and some rheumatic affections. 1 to 10 of water is used as a lotion to the mucous membrane where there is a discharge of a muco-purulent character, especially useful in leucorrhœa.—Phillips, Mat. Med. and Ther.

Anemonin is the active principle of Pulsatilla. It lessens the number of respirations and cardiac contractions in frogs, cutaneous sensibility and excitability of the motor nerves is preserved, but muscular irritability is lowered. The heart beats after respiratory movements cease.—L. ii./82,116.

Use in eclampsia and sympathetic neuroses; and other therapeutic uses in dose of tincture of 5 to 30 minims. —Pr. xxix.32.

QUEBRACHO CORTEX.

White Quebracho Bark.

The bark of *Aspidosperma Quebracho*, imported from the Argentine Republic, is met with in pieces about ½ inch thick, with a fibrous cinnamon brown-coloured interior, breaking with a short fracture, and having a warty, reddish ochre-coloured suberous exterior. It has a bitter, slightly aromatic taste. It contains the alkaloid Aspidospermine and other principles.—P.J. 1882,781.

Aspidospermine Sulphate is in crystals, which are unstable, becoming amorphous on keeping; it is much more soluble in water than the alkaloid. Quebracho and its preparations have been employed as remedies in certain forms of asthma and to relieve the dyspnœa of this disease.—B.M.J. i./80,167.

Tinctura Quebracho.

Is prepared 1 in 5 of proof spirit.—P.J. 1879,485.
Dose.—½ to 1 drachm or more.

QUINETUM.

Dose.—1 to 5 grains or more.

The mixed alkaloids, in amorphous greyish white powder, obtained from red cinchona bark, *Cinchona succirubra,* slightly soluble in water, but readily and perfectly dissolves in it with the aid of a dilute acid. It consists principally of cinchonidine (50 to 70 per cent.) with some quinine, cinchonine, &c.; is much cheaper than quinine.

Quineti Sulphas, Quinetum Sulphate.

Dose.—1 to 5 grains or more.

The crystallizable sulphates of the above, in acicular crystals resembling quinine, slightly soluble in water, but readily dissolves with the aid of an acid. May be made into pills with glycerine of tragacanth, or given in aqueous solution with acid and tincture of orange-peel. It is not nauseously bitter.

References.

As a tonic, 1 to 3 grains; in ague 10 to 15 grains; no unpleasant effects during its administration.—M.T.G. ii./76,474.

In ague does not produce deafness; is even more powerful than quinine.—Pr. xx.83.

In ague 10 to 15 grain doses act as well as quinine, is half the price.—B.M.J. i./79,800; Pr. xxii.452.

QUINIA.

Quinine.

Dose.—1 to 4 grains or more (if anhydrous, 3 parts are equal to 4 of sulphate).

The most valued alkaloid obtained from cinchona barks,—is a very bitter, white, or, if well dried, greyish white amorphous powder, slightly soluble in water, soluble in ether, alcohol, chloroform, and dilute acids. Soluble also in aqueous ammonia. One grain dissolved in a drachm of aromatic spirit of ammonia forms an agreeable dose. Its solution in diluted sulphuric acid is fluorescent, levogyrate, and gives, with solution of chlorine and ammonia afterwards added, a characteristic emerald-green colour due to thalleioquin.

Preparations in use medically, with references.

Oleatum Quiniæ.—See p. 188.

Oleum Morrhuæ cum Quiniâ.—See p. 188.

Quiniæ Chloras, Quinine Chlorate.

Dose.—1 to 5 grains or more, in pill with glycerine of tragacanth.

In slender white needles, slightly soluble in water. It explodes when heated.

Quiniæ Citras, Quinine Citrate.

Dose.—1 to 5 grains or more, in pill with glycerine of tragacanth, or slightly powdered and suspended in water, in which this salt iss paringly soluble—1 in 900—has, therefore, little taste in this form. It is in acicular crystals like the sulphate.

Ferri et Quiniæ Citras (*Off.*).

Dose.—5 to 10 grains in aqueous solution, or in pills with Canada balsam, resin ointment, or mucilage of acacia (with the last excipient, unless made very hard, they lose shape). This much-used preparation contains 16 per cent. of quinine, is in greenish golden scales, slightly deliquescent, and very soluble in water. It has an agreeable bitter, chalybeate taste.

Syrupus Ferri et Quiniæ Citratis.

Dose.—1 drachm or more.

Is generally prepared by dissolving 3 grains Citrate of Iron and Quinine in a drachm of syrup of orange-peel.

Ferri, Quiniæ et Strychniæ Citras (p. 246) is the former preparation, with 1 per cent. of strychnine added.

Quiniæ Hydrobromas, Quinine Hydrobromate.

Dose.—1 to 5 grains or more.

In white acicular crystals smaller than the sulphate, and much more soluble in water (1 in 16). Quinine is given with an excess of hydrobromic acid to lessen the cinchonism sometimes caused by large doses.—B.M.J. ii./76,42. Use as an antipyretic. Pr. xxi.443.

Quiniæ Hydrobomas Acida, Quinine Acid Hydrobromate.

Dose.—½ to 2 grains hypodermically.

In yellowish large rectangular prisms or masses of crystals, or in powder. A very soluble salt of quinine, dissolves 1 in 6 of water, richer in the alkaloid than the sulphate, is therefore well adapted for hypodermic injection. It is entirely unirritating.—M.R. 1880,443.

Injectio Quinæ Hydrobromatis Acidæ Hypodermica.

Acid Hydrobromate of Quinine	1 grain.
Distilled Water to	6 minims.

Dissolve.

Dose.—3 to 12 minims. Useful in ague where quinine cannot be borne by the stomach; a very much less dose of this will act than that required to be given by the mouth.

Quiniæ Hydrochloras, Quinine Hydrochlorate.

Syn.—Muriate of Quinine.

Dose.—1 to 5 grains or more.

In acicular white crystals generally larger than the sulphate, soluble 1 in 36 of water, 1 in 3 of rectified spirit.

Very soluble salt of Quinine, and richer in alkaloid than the sulphate; contains 83 per cent. against 74½ per cent. in the sulphate. Recommended for making Tincture of Quinine and as an antiseptic.—P.J. 1878,407.

Is a powerful germicide; 1 in 800 prevented the development of any germs in a liquid suitable for their growth.—B.M.J. ii./81,408; Trans. Med. Congress, 1881,i.466.

Quiniæ Hydrochloras Acida.

Dose.—½ to 2 grains, hypodermically.

In white or yellowish white crystalline crusts very soluble in water. 1 in 6 is suitable for Hypodermic Injection.

Quiniæ Salicylas, Quinine Salicylate.

Dose.—2 to 6 grains.

In white silky flexible acicular crystals, sparingly soluble in water, and the addition of acids does not help its solubility. Should be administered suspended in water, or better in pills with glycerine of tragacanth and a little acacia as excipients.

Useful in rheumatic gout, 3 grains every 6 hours.—L. i./80,540,582.

Quiniæ Sulphas, Sulphate of Quinia (*Off.*).

Syn.—QUININE SULPHATE; DISULPHATE OF QUININE. (Formerly so termed, often now called simply Quinine, as it is the salt most largely manufactured and most cheaply and conveniently made.)

Dose.—1 to 5 grains as a tonic; 5 to 15 grains or more as an anti-periodic.

In slightly flexible acicular snow-white crystals, with a pure, intensely bitter taste. Soluble 1 in 740 of cold water, 1 in about 100 of rectified spirit, 1 in 40 of glycerine, is precipitated from solution by tannic acid, alkalies and their carbonates, but redissolved by an excess of aqueous ammonia. It is generally prescribed in solution or pills. To render ordinary doses of it soluble in water, a dilute mineral acid in the proportion of at least one minim to each grain should be ordered, the sulphate should be moistened with a little water before the addition of the acid, particularly if this be sulphuric acid, the soluble acid salt formed will thus be held in solution, and this may be diluted *ad libitum.* Tincture of orange-peel agreeably harmonizes with and covers the bitterness of Quinine. Although incompatible with alkalies, it is often ordered in conjunction with aromatic spirit or carbonate of ammonia, which precipitate the quinia as a sticky mass on the sides of the bottle. To avoid this separation, some mucilage of acacia should be prescribed in the mixture, which prevents the aggregation of the alkaloid and holds it suspended in the liquid. In cases of fever, large doses are thought to be more efficacious with the sulphate of quinine not dissolved. It may be given in moist wafer paper, or, diffused in water if lightly powdered so as to break the crystals, but not to make them cake and adhere. It can be conveniently formed into pills by adding to 4 parts 1 of glycerine of tragacanth, carefully avoiding excess of the latter, or strong sulphuric acid in the proportion of one drop to five grains, makes a good pill; confection of hips is often used as an excipient, as in Pilula Quiniæ, B.P., 3 parts to 1 of confection is ordered, but more of the latter is required. The uses of Quinine internally are well known. Its solution possesses powerful antiseptic properties. Three grains to an ounce as an eye lotion has a specific action in diphtheritic ophthalmia.—L. i./80,125; L. i./82,6; L ii./83,12.

Collunarium Quiniæ, Quinine Nasal Douche, T.H.

Sulphate of Quinine	...	½ grain.
Water	...	1 ounce.

Dissolve by the aid of gentle heat. Used in hay-fever a little is placed in the palm of the hand and drawn up through the nose. If a stronger solution be required, the Acid Sulphate or Hydrochlorate of Quinine should be used, an excess of acid for this purpose should be avoided.

Syrupus Ferri, Quiniæ et Strychniæ Phosphatis.—See Ferri Phosphas, p. 129.

Tinctura Quiniæ (*Off.*).

Dose.—½ to 2 drachms.

The sulphate in the proportion of 1 grain in a drachm is ordered to be dissolved with a gentle heat, and after three days filtered. A very agreeable form of taking small doses of Quinine. The author suggests the use of Hydrochlorate of Quinine in place of Sulphate; the former dissolves in the tincture, without heating, readily and perfectly. In preparing it with the Sulphate there is always a quantity of sulphate of lime separates by double decomposition from a soluble salt of lime in orange-peel, and, besides, Sulphate of Quinine is with difficulty soluble in the above proportion of tincture, and often in winter will crystallize out.—P.J. 1878,407.

Tinctura Quiniæ Ammoniata (*Off.*).

Sulphate of Quinine ...	160 grains.
Proof Spirit	8 ounces.
Mix. Also mix	
Solution of Ammonia ...	2½ ounces.
Proof Spirit	9½ ounces.

Add this to the above mixture, and the Quinine will dissolve immediately. Contains one grain in a drachm. The quinine precipitates on addition to water; mixed with an equal quantity of syrup of orange-peel, it is palatable, keeps bright, and bears dilution better.

Dose.—½ to 2 drachms.

Vinum Quiniæ (*Off.*).

Contains one grain of the sulphate with a grain and a half of citric acid dissolved in one ounce of orange wine.

Dose.—½ to 1 ounce.

It is a much more satisfactory preparation, keeps brighter, &c., if made with the Hydrochlorate of Quinine.

Warburg's Fever Tincture. A nostrum, the published formula of which shows that it is a proof spirit tincture, containing Sulphate of Quinine 1 in 50, Socotrine Aloes 1 in 30, Opium about 1 in 1200, Rhubarb 1 in 125, Camphor 1 in 500 with several aromatics.—L. ii./75,716.

Dose.—1 to 4 drachms or more. Originally directed for Indian Fever, ague, &c., one ounce as a dose repeated in 2 or 3 hours; before giving the first dose the bowels should be freely opened, and no food recently taken. Between the two doses nothing should have been taken but a little brandy or beef-tea, and this only if the state of the patient required it.

Not to be compared with aconite in remittent fever.—Pr. xxvi.187.

Quiniæ Sulphas Acida, Quinine Acid Sulphate.

Syn.—SOLUBLE SULPHATE OF QUININE, NEUTRAL SULPHATE OF QUININE (so-called when the other sulphate was called Disulphate).

Dose.—1 to 5 grains or more.

Usually met with in large rectangular prisms or masses of crystals. Soluble 1 in 12 of cold water.

Injectio Quiniæ Sulphatis Acidæ Hypodermica.

Acid Sulphate of Quinine ...	1 grain.
Water, to	12 minims.

Dissolve.

Dose.—4 to 18 minims.

Quiniæ Sulphocarbolas, Quinine Sulphocarbolate.

Dose.—1 to 6 grains in pill with glycerine of tragacanth. One part of Sulphate of Quinine and two parts of Absolute Phenol, liquefy and form an oily, colourless fluid. If hot aqueous solutions of the two are mixed in equivalent quantities, Sulphocarbolate of Quinine separates on cooling. This salt is met with in commerce as an amorphous white powder, soluble 1 in 680 of water, 1 in 74 rectified spirit. The so-called Carbolate of Quinine is generally a Sulphocarbolate as found in commerce.

Quiniæ Valerianas.

Dose.—1 to 4 grains.

In white shining crystalline, odourless, rhomboidal plates, or, as more frequently met with in commerce, an amorphous white powder with a slight valerianic odour, soluble 1 in 110 cold water; best administered in pills with glycerine of tragacanth and a little acacia as excipients; given in nervous headache and hysteria.

QUINIDIÆ SULPHAS.

Quinidine Sulphate.

Syn.—CONQUININE, or CONCHININ SULPHATE (Hesse).

Dose.—1 to 20 grains.

Quinidine is an alkaloid obtained from cinchona, principally from Pitayo and Cuprea barks. The sulphate is in white acicular crystals very like sulphate of quinine. Soluble in 350 of water, 1 in 32 of absolute alcohol, rendered more soluble in water by the addition of acid—a minim or more of diluted sulphuric acid to a grain—may be dispensed thus, or 5 parts of the sulphate with one of glycerine of tragacanth in pills. Its solution is fluorescent, but dextrogyrate, and, like quinine with which it is isomeric, its solution produces an emerald-green colour with chlorine water and ammonia. Quinidine salts are powerful antiperiodics, equal to those of quinine, to which they stand next in market value. Quinidine Sulphate is suitable for administration to children, being less bitter than the other cinchona alkaloids.

Reference.

In typhoid and ague, doses of 15 to 30 grains with dilute sulphuric acid and peppermint water was attended by good results.—B.M.J. i./79,937, *ex* Allgemeine Medicin. Central-Zeitung.

QUINOIDIA.

Quinoidine.

Syn.—CHINOIDIN, U.S.

Dose.—1 to 5 grains or more.

The mixed amorphous alkaloids, purified from resin, obtained as a bye-product in preparing salts of cinchona alkaloids. It is a brownish-black, resinous-like substance, has a vitreous fracture, nearly insoluble in water, is dissolved by acid solutions, which deposit on dilution. Solutions either in boracic or sulphuric acid are used as cheap febrifuges. The taste of these is very nauseous.

RESORCIN.

Dose.—5 to 15 or 30 grains.

A derivative of benzol or phenol, in white crystalline plates, larger than, but resembling, benzoic acid in appearance, melts at 110° F., and is easily volatilised. Soluble in less than 2 parts of water, and 1 in 20 of olive oil. It possesses powerful antiseptic properties. A one per cent. solution prevents putrefaction in such substances as pancreas, blood, and urine, and a stronger solution will destroy the vitality of low organisms. It coagulates albumen, and has a caustic action on the skin, but a 2 per cent. solution is not irritating to it. It is an effective remedy in diphtheritic affections, and produces no injurious consequences. A 5 per cent. solution may be injected into the bladder without causing any irritation, and is useful in inflammatory affections of this organ, likewise in vesical catarrh after gonorrhœa; 5 to 10 per cent. solution is of service also in syphilitic sores and skin diseases; and a 1 per cent. solution improves the appearance of unhealthy wounds, and is useful as an eye lotion in conjunctivitis. Given internally, it has a specific action comparable to quinine; is best administered well diluted with water and flavoured with syrup of orange or glycerine.—L. ii./80,777; L. ii./81,1065; B.M.J. ii./81,944; Pr. xxvii.381; Pr. xxix.189; Pr. xxx.63.

Use as an application in cancer.—L. ii./82,1033.

Case of poisoning by, with recovery.—M.T.G. ii./81,486.

Whooping-cough, 30 successful cases treated by spray of resorcin every two hours.—B.M.J. i./84,695.

RHAMNUS FRANGULA.

Black Alder.

The bark of this imported principally from Holland in quills about half a line thick, with a warty, greyish brown exterior, contains the crystalline principle Emodin; this is also found in rhubarb root. The bark should not be employed medicinally until it is at least one year old, else, it is stated, it produces sickness as well as purging. It possesses tonic, laxative properties, does not cause griping, or does not need the dose increased if habitually taken. It is especially useful in cases of hæmorrhoids.—P.J. 1871,152; P.J. 1874,889.

Extractum Frangulæ Fluidum, U.S.

Dose.—1 to 4 drachms.

The bark is exhausted by a mixture of alcohol 1, water 2, and concentrated, so that one ounce = one ounce of bark.

Trochisci Rhamni Frangulæ are sold as a special preparation under the name of "Aperient Fruit Lozenges."

Dose for an adult.—1 to 1½ or 2 lozenges.

Cascara Sagrada. From this drug, which is the bark of **Rhamnus Purshiana,** are prepared,—

Extractum Cascaræ Sagradæ.

Dose.—2 to 8 grains in a pill.

Extractum Cascaræ Sagradæ Fluidum.

Dose.—10 to 60 minims.

These two, and a Cascara Cordial—dose 15 to 60 minims—are imported American preparations, said to possess special "tonic laxative" properties. Large doses are cathartic, small are tonic and stomachic.

In obstinate constipation, 20 drops 3 times a day and dose then gradually lessened, establishes a habit of regularity; for children smaller doses give good results.—B.M.J. i./83,456.

Acts as a vegetable bitter, increases peristalsis, empties rectum, and is useful for internal piles.—Edin. Med. Jour., 1884,753,845.

Is certainly a good laxative in habitual constipation.—B.M.J. i./84,556.

RHUS.

Poison Oak.

Syn.—POISON IVY; RHUS TOXICODENDRON LEAVES.

Tinctura Rhois.

Dose.—1 to 5 minims or more. (?)

This is generally imported from North America, as it is said to be best prepared from the fresh leaves, collected at sunset and never exposed to the sun. The emanations of the living plant produce an eczematous eruption of the skin. It has been used for rheumatism in chronic cutaneous affections, paraplegia, and incontinence of urine from atony of the bladder.

Emplastrum Rhois in rubber combination, 1 yard rolls, is an imported preparation.

RUMICIN.

Dose.—1 to 4 grains, in a pill with glycerine of tragacanth.

The dried extract of the root of *Rumex crispus*—yellow dock. Possesses astringent, tonic, and anti-scorbutic properties, and is given in scrofulous skin diseases and as a depurative in congested liver and dyspepsia. Yellow dock root contains Chrysophanic Acid.

Tinctura Rumicis.

One of yellow dock root in 10 of proof spirit.

Dose.—1 to 10 minims or more.

SANGUINARIN.

Dose.—¼ to 1 grain, in a pill with glycerine of tragacanth.

The powdered resinoid of a coffee-brown colour obtained from blood-root—*Sanguinaria Canadensis.* In small doses, stimulant and tonic; in larger doses sedative, reducing the pulse, and increasing expectoration; in still larger doses, emetic.

Reference.

On dog, stimulates secretion of bile, which is more watery. Is a decided and powerful cholagogue, over-doses are emetic.—B.M.J. Rep. 1878,65; Pr. xxiii.411.

It is undoubtedly emmenagogue and useful in functional amenorrhœa, also useful in dyspepsia and gastro-intestinal catarrh.—B.

SANTONINUM.

Santonin (*Off.*).

Dose.—2 to 6 grains in sugar or milk.

A neutral crystalline principle obtained from Santonica or Cina, the flower-heads of *Artemisia maritima vars. a Stechmanniana* and *β pauciflora.* Santonin is insoluble in water, slightly soluble in alcohol and oils (1 in 100 of castor oil). Soluble in caustic soda solution, exposed to light it turns yellow. Poisonous properties have been ascribed to it, probably due to impurities. It is a useful anthelmintic for round and thread worms. It colours the urine orange, and in too large a dose may cause objects to appear of a green or yellow colour.

As an anthelmintic is most active administered in an oily solution.—L. i./83,971.

Haustus Santonini et Olei Ricini.

Santonin in powder	...	4 grains.
Castor Oil ...	... ...	3 drachms.

Mix and emulsify with

Mucilage of Acacia	...	4 drachms.
Syrup ...	... ...	1 drachm.
Peppermint Water to	...	1½ ounce.

Taken fasting in the morning makes a dose for a child of 6 to 12 years.

Trochisci Santonini.

These lozenges contain 1 grain in each; one every night for a few nights should then be followed by an early morning aperient.

Suppositorium Santonini.

Santonin in powder	...	3 grains.
Oil of Theobroma	...	*q.s.*

To make a suppository. Should be administered every 2nd or 3rd night, for 3 times. Is an efficient anthelmintic, especially for thread worms, which often infest the anus of children, causing them to have disturbed sleep.

References.

Inoperative against tape worm; 2 to 4 grains according to age, with one or more teaspoonfuls of castor oil early in the morning, repeated two or three mornings, seldom fails for thread worms.—R.

Peculiar effects on the eyes and sight; does good in iritis, 30 grains distributed into 10 doses, in 5 days.—M.T.G. ii./60,219.

Convulsions in a child produced by 1½ grain. – L. ii./76, 443.

Poisonous symptoms from its depressing effects on the nervous system.—B.M.J. i./79,322.

Sodii Santonas, Santonate of Sodium.

Dose.—5 to 10 grains.

In large colourless rhomboidal crystals, obtained by combination of Santonin with Caustic Soda, soluble 1 in 100 of water, freely soluble in hot glycerine, but separates on cooling; slightly soluble in syrup, has a mawkish, not disagreeable taste; may be administered in aqueous solution flavoured with syrup of orange, or in warm milk.

SAPO VIRIDIS.

Green Soap.

German.—**Grune Seife. Sapo Kalinus.**

In Germany this term is applied to the common potash or soft soap in commerce. It is generally made with either hemp seed or linseed oil. It differs from the common soft soap of English commerce, which is a potash soap made from fish oils and has a disagreeable odour, which the former is void of. The Green Soap has a pale brownish green colour, and is a useful detergent in some skin diseases. In the German Pharmacopœia, 1882, Sapo Kalinus is directed to be prepared with linseed oil only.

Reference.

Scabies treated successfully by inunctions of ½ ounce of Green Soap twice a week, followed in half an hour by ablutions with warm water. Internally, cod liver oil administered.—Pr. xxviii.136.

SCILLIPICRIN.

Dose.—?

A principle obtained from *Scilla maritima*—the squill bulb. Is an amorphous yellowish white powder, very hygroscopic, and soluble in water—suitable for hypodermic injection. Acts powerfully on the heart, retarding its action, and in toxic doses—$\frac{1}{60}$ to $\frac{1}{30}$ grain in the frog—arrests the heart in diastole.—B.M.J. ii./79,498; P.J. 1879,1088.

SCILLITOXIN.

Syn.—SCILLAIN.

Dose.—?

A principle from *Scilla maritima*—the squill bulb. Is an amorphous cinnamon-brown powder, insoluble in water and ether; soluble in alcohol, this solution has a bitter, burning taste. It is also soluble in aqueous alkaline solutions. The powder is very irritating to the nostrils. It arrests the action of the frog's heart in systole, and is about 8 times as strong a poison as scillipicrin.—B.M.J. ii./79,498; P.J. 1879,1038.

SCUTELLARIN.

Dose.—1 to 5 grains, in a pill with glycerine of tragacanth.

The dried extract of *Scutellaria lateriflora*—mad-dog skull-cap. Is of a greenish brown colour, and is given as a nervous stimulant.

SODIUM SALTS.

By experiments on the ventricle of the frog's heart it has been proved that, whilst Potassium Salts are very poisonous, Sodium Salts can scarcely be made to kill. By Potassium Salts excitability and contractility are both powerfully affected; by Ammonium Salts excitability practically unaffected, contractility powerfully affected; a wide gap separates Sodium Salts from the last, by these excitability is slightly affected, but contractility suffers chiefly; Potassium Salts, by these experiments, are 14 or 15 times as poisonous as Sodium Salts. The therapeutic importance of these results is obvious. Bromide, iodide, and chlorate of potassium are largely given as medicines; the above would suggest the use of the Sodium Salts in preference. Clinical evidence tends to prove the same by their action on the entire organism, as may be judged by the favour shown of late to the latter salts, especially to Bromide of Sodium.—L. i./82,1033; L. ii./82,736; B.M.J. i./82,942; Pr. xxvii.7.

Unofficial Sodium Preparations.

Sodii Benzoas.—See Acidum Benzoicum, p. 2.

Sodii Bromidum.

Dose.—10 to 30 grains or more.

A slightly deliquescent granular white powder, tasting like common salt; soluble 8 in 9 of water. The anhydrous salt only should be used medicinally, it can be crystallized containing 26 per cent. of water. If therapeutically as active as bromide of potassium, Bromide of Sodium is preferable, from its weaker action on the heart.—Pr. xxviii.7; L. ii./82,736; Pr. xxxi. 224, *ex* Boston Med. and Surg. Journ. cviii, 438.

Use in Epilepsy with cardiac complications.—Pr. xxii.81.

Sodii Chloras.

Dose.—10 to 30 grains.

In large regular modified tetrahedric crystals, colourless, and has a mawkish, not disagreeable, saline taste, soluble 1 in less than 2 parts of water, and 1 in 34 of rectified spirit. It fuses and deflagrates when exposed to a red heat. For many purposes for which chlorate of potassium is used, this salt is to be preferred. For stomatitis, with ulceration along the edges of the gums the evidence in its favour is every bit as unequivocal as it it is for potassium chlorate.—L. ii./82,736.

Case of poisoning by chlorate of potassium taken instead of the alkali of a seidlitz powder.—L. ii./81,193; B.M.J. ii./81,23.

Trochisci Sodii Chloratis (3 grains in each).

Are prepared in two forms, with black currant paste, and with plain sugar. They are much more palatable than chlorate of potassium lozenges, and are quite as beneficial as these in affections of the mouth and throat. —L. ii./82,737.

Sodium Ethylate, Solution of.

Prepared by dissolving metallic Sodium in absolute alcohol. The solution is syrupy, of a vinegar brown colour, and is recommended as the most manageable and effective of all caustics. It is used to destroy nævi and other vascular growths. It should be lightly, but effectually applied to the part by means of a pointed glass rod for 2 or 3 successive days, when a scale or scab will form, which should be left until it is loose, and the treatment continued again. It is said to cause little or no pain. No water should be allowed to touch the part under treatment. —M.T.G. ii./70,472; L. ii./78,625,654; L. i./81,168,242; P.J. 1878,479,480,485.

Pasta Londinensis, London Paste, T.H.

Caustic Soda and Unslaked Lime of each equal parts, rubbed together in a warm mortar—made into paste when required for use as a caustic. It is said to be less painful than **Vienna Paste,** which is Caustic Potash 5, Slaked Lime 6, made into a Paste with spirit.

Sodii Hippuras.—See p. 3.

Sodium Hypobromite, Solution of.

Caustic Soda	100 grammes.
Distilled Water	250 c.c.

Dissolve, cool, and add guttatim.

Bromine	25 c.c.

Mix and dissolve. This solution is used to estimate the amount of urea in a given quantity of urine. On adding the solution, nitrogen is evolved from the urea, and is measured in a suitable apparatus, in which each graduation represents 1 per cent. of urea in the urine.—Jour. Chem. Soc., 1874, 749; L.H. 228; L. ii./74,695; L. i./77,559.

Sodii Hyposulphis. — See **Acidum Sulphurosum**, p. 32.

Sodii Iodidum.

Dose.—3 to 20 grains.

A very deliquescent white powder may be made by decomposing a solution of iodide of iron with carbonate of sodium, filtering and evaporating the filtrate to dryness. Soluble 3 in 2 of water.

Sodii Nitris.

Dose.—2 to 5 increased to 10 grains.—**Compressed Tablets,** weighing 2½ grains each, are prepared.

A white, deliquescent, granular crystalline powder, with a cooling saline taste, soluble 1 in 1 of water; useful in angina pectoris and in epileptiform convulsions. In these has an action similar to nitrite of amyl.—Pr. xxviii.420; Pr. xxx.179,321.

17 cases of epilepsy, in 9 the drug succeeded in controlling the fits, 12 grains the most suitable dose.—L. ii./82,941 ; B.M.J. ii./82,1095.

In epilepsy, scruple doses, with the same of bromide of potassium, after 8 weeks patient thought himself better. In another case, scruple doses given alone, it failed.—Pr. xxx.105. (? Impure salt used.)

Its effects in cases of angina pectoris, in dose of 5 to 10 grains, compared with nitrite of amyl and nitroglycerine are said to be more lasting.—Pr. xxx.179,321.

To healthy adults doses of 10 and 5 grains are unbearable, and many cannot bear even 3-grain doses.—L. ii./83,766.

Sodæ Phosphas (*Off.*).

Syn.—HYDRO-DI-SODIC PHOSPHATE; TASTELESS PURGING SALT; PHOSPHATE OF SODIUM.

Dose.—20 grains to 1 ounce, may be given in broth or soup.

Soluble 1 in 5 of water, is very efflorescent, loses 63 per cent. of its weight when heated to dull redness.

Sodii Phosphas Effervescens.

Dose.—1 to 3 drachms.

This forms a convenient and pleasant mode of taking this useful purgative.

Sodii Phosphas Exsiccata.

Dose.—10 grains to 4 drachms in some warm liquid.

Phosphate of sodium is mildly aperient, well suited for a delicate stomach; in small doses it is antacid and diuretic, useful in bilious sick-headache and jaundice.

It acts as a powerful hepatic stimulant and a moderately powerful intestinal stimulant, on the dog.—B.M.J. i./79,177.

For hepatic calculi, 60 grains 3 times a day, recommended with $\frac{1}{20}$ grain arseniate of sodium added, if any evidences of gastric intestinal catarrh are present.—B.

Sodii Salicylas.—See Acidum Salicylicum, p. 26.

Sodii Santonas.—See Santoninum, p. 239.

Sodium Silicate, solution of.

Syn.—SOLUBLE GLASS.

A viscid solution, the consistence of treacle, usually containing 10 per cent. of caustic soda and 20 per cent.

STRYCHNIA (*Off.*).

Strychnine.

Dose.—$\frac{1}{80}$ or less to $\frac{1}{12}$ grain, in solution or in pill triturated with sugar of milk, and glycerine of tragacanth *q.s.*

The alkaloid obtained from the seeds of *Strychnos Nux-vomica* and also from the seeds of other species of *Strychnos*. In right square octahedrons or prisms, colourless and inodorous. Amorphous Strychnine should not be used, as it is more liable to contain, as an impurity, Brucine (also contained in *Nux-vomica*). Pure Strychnine should not be coloured by strong nitric acid, indicating an absence of Brucine. It is very slightly soluble in water, about 1 in 6000, about 1 in 100 of proof spirit, soluble also in chloroform, but insoluble in absolute alcohol and ether. Its salts are more soluble, and acids render the alkaloid more soluble in water. It is very poisonous; it affects the spinal cord by producing convulsions resembling those of tetanus. Its properties are so well known as not to need further description here.

It is antagonistic to calabar bean and its preparations, yet not in the sense that the administration of the one can save life after the administration of a fatal dose of the other, as chloral may in Strychnine poisoning.—B.M.J. ii./74,805.

In addition to the Liquor Strychniæ, the following salts and non-official

Preparations

Are in use:—

Ferri et Strychniæ Citras.

Dose.—3 to 8 grains in aqueous solution.

In scales of a greenish golden colour resembling citrate of iron and quinine, freely soluble in cold water. It contains 1 per cent. of Strychnine. Some makers of this preparation send it out dark brown in colour, resembling citrate of iron and ammonia; it then contains only the Ferric Citrate with Ammonia, and with this preparation it is difficult to distribute the Strychnine uniformly, as it is apt to crystallize out of the concentrated liquor before "scaling."

Ferri, Quiniæ et Strychniæ Citras.

Dose.—3 to 10 grains.

This is in scales of a greyish-golden colour like the former preparation, but in addition to 1 per cent. of Strychnine it contains 16 per cent. of Quinine.

Liquor Strychniæ (*Off.*).

Strychnine	4 grains.
Diluted Hydrochloric Acid...	6 minims.
Rectified Spirit	2 drachms.
Distilled Water up to ...	1 ounce.

Heat these (with exception of the spirit) and dissolve; when cold, add the spirit.

Dose.—4 to 10 minims.

Strychniæ Acetas.

Dose.—$\frac{1}{24}$ to $\frac{1}{10}$ grain.

In small colourless acicular crystals, soluble 1 in 80 of water.

Strychniæ Nitras.

Dose.—$\frac{1}{24}$ to $\frac{1}{10}$ grain.

In hard colourless needles, soluble 1 in 70 of water.

Injectio Strychniæ Nitratis Hypodermica.

Nitrate of Strychnine ...	2 grains.
Glycerine	50 minims.
Distilled Water	50 minims.

Heat gently till dissolved.

Dose.—1 to 4 minims.

In nocturnal incontinence of urine used with good results.—Pr. xxiii.376.

In amaurosis used with powerful curative effects.—M.T.G. i./71,76,431.

In gastralgia, no such remedy as this, also recommended to relieve pain of cardialgia and gastrodynia.—Anstie in R.

Strychniæ Sulphas.

Dose.—$\frac{1}{24}$ to $\frac{1}{10}$ grain.

The neutral salt is in prismatic crystals, soluble about 1 in 80 of water.

Strychniæ Sulphas Acida.

Dose.—$\frac{1}{60}$ to $\frac{1}{10}$ grain.

In white silky acicular crystals with a slightly acid reaction, soluble 1 in 36 of water. This salt is best adapted for hypodermic injection.

Injectio Strychniæ Sulphatis Hypodermica.

Acid Sulphate of Strychnia...	1 grain.
Distilled Water	40 minims.

Dose.—1 to 3 minims.

Bromide of Potassium 15 to 20 grains an antidote to Strychnia poisoning (Pr. xxiv.210). The dose of bromide should be at least 4 drachms and repeated in 2 drachm doses every quarter of an hour.—Murrell o Poisons.

Poisoning by three quarters of a grain successfull treated by one drachm of hydrate of chloral with ha an ounce of bromide of potassium and an ounce afte wards given in divided doses.—L. i./81,52.

Stimulates the respiratory centres and is useful i embarrassed breathing.—Trans. Med. Congress, 1881, i.458.

Paraldehyde is antagonistic to Strychnia.—M.P.C. i./84,232.

SULPHUR.

Dose.—20 to 60 grains in milk, treacle, with confection of senna, or as Pulvis Liquiritiæ Compositus (p. 143).

This is official as **Precipitated Sulphur** and **Sublimed Sulphur.** From the latter is prepare Confectio Sulphuris: Sulphur 4, Acid Tartrate of Potas 1, Syrup of Orange-peel 4, *dose,* 1 or 2 drachms; and Unguentum Sulphuris: 1 to 4 of Benzoated Lard it is also used for making the two following ointments, b **Precipitated Sulphur** in all these preparation for use either internally or externally, being free fro grittiness, is much to be preferred; it is in fine powde if genuine, sublimes without residue, and has not th glistening appearance of the old lac sulphuris (due to th presence of sulphate of calcium.)

Unguentum Sulphuris c. Hydrargyro, U.C.H.

Sublimed Sulphur	30 grains.
Ammoniated Mercury ...	5 grains.
Olive oil	8 minims.
Lard	8 drachms.

To this may be added, to disguise its colour or odour, or increase its activity, either 2 grains of vermilion, 10 minims of eucalyptus oil, 10 grains of carbolic acid, or 5 minims of creasote. Useful in scabies and allied skin diseases of doubtful diagnosis.

Unguentum Sulphuris Hypochloritis.

Sublimed Sulphur ...	... 1 drachm
Essential Oil of Almonds	... 10 minims.
Prepared Lard ...	... 7 drachms.

Mix, and add with quick manipulation

Chloride of Sulphur (Liquid)	8 minims.

Keep in a stoppered bottle; is sometimes made double this strength, i.e., with half the quantity of basis. Useful in acne, psoriasis, and scabies.

Unguentum Sulphuris Iodidi (*Off.*). Has 30 grains to 1 ounce of lard: it mixes more readily if the iodide be first triturated with a little spirit; is useful for acne.

TABLETS, COMPRESSED

Are prepared of a lenticular shape of the following drugs:—

Ammonium Chloride ...	... 3	grs.	in each.
Ammonium Chloride ... Borax	... 2½ ... 2½	”	”
Potassium Bicarbonate...	... 5	”	”
Potassium Bromide ...	... 5	”	”
Potassium Bromide ...	... 10	”	”
Potassium Chlorate ...	... 5	”	”
Potassium Chlorate (effervescing)	3	”	”
Potassium Chlorate ... Ammonium Chloride ...	... 3½ ... 1½	”	”
Potassium Chlorate ... Borax	... 2½ ... 2½	”	”
Potassium Iodide ...	... 5	”	”
Sodium Bicarbonate ...	... 5	”	”
Sodium Nitrite... ...	... 2½	”	”

Soda-Mint, or Neutralising Tablets.

Sodium Bicarbonate ... Ammonium Carbonate... Oil of Peppermint ...	... 4 ... ¼ ... ⅙	”	”

TEREBENA PURA.

Pure Terebene.

Dose.—5 to 30 minims.

An isomer of oil of turpentine produced by the action of sulphuric acid (oil of vitriol) on the latter, and distillation. Is colourless, and has a very agreeable odour resembling fresh-sawn pine wood. It is not miscible with water, but may be emulsified by mixing it with one-sixth its weight of tragacanth powder, then adding water and shaking well. It is a powerful yet agreeable antiseptic, disinfectant, and deodoriser.

Vapor Terebenæ, T.H.

Terebene, pure	40 minims.
Light Carbonate of Magnesia	20 grains.
Distilled water ... to	1 ounce.

A teaspoonful in a pint of water at 140° for a stimulant inhalation. For medicating the antiseptic respirators, 10 drops of a mixture of equal parts, Terebene, carbolic acid, and spirit of chloroform, is often used.

A dark-coloured liquid, with an odour resembling but not so agreeable as the above, is sold as a disinfectant, under the name of Terebene, and must be distinguished from the pure chemical bearing this name as above described; it is a useful deodoriser, but, being insoluble in water, does not permeate decomposing substances.

References.

The vapour of Terebene is a useful sedative and antiseptic inhalation in phthisis, and, administered internally at the same time in 5-minim doses, it destroys the virus of swallowed sputa, and lessens the risk of intestinal infection; useful also in dysentery.—B.M.J. ii./81,666.

Recommended for medicating the cotton wool of respirator for dry antiseptic inhalation in phthisis.—B.M.J. ii./82,7; Pr. xxix.94.

TEREBINTHINA CHIA.

Chian Turpentine, P.L.

Dose.—5 to 10 grains.

An oleo-resin flowing from the incised trunk of *Pistacia Terebinthus;* obtained from Chio. The use of this drug, which had fallen into desuetude, was, in 1880, revived as a remedy for cancer of the female generative organs. In commerce it is often factitious. The genuine drug has a very firm honey-like consistence, yet is slightly brittle, and becomes more so with age and exposure to the air. It is translucent, small pieces appear yellow or brownish-yellow, but in mass it has a greenish-brown colour. It has, when fresh, a distinctive odour, slightly like the pinaceous turpentines, but much more agreeable and aromatic, resembling citron and jasmine, or, according to Pereira and Guibourt, more like fennel; but there is always a background smell like that of mastic, which becomes more developed and distinct with age, when it has lost the volatile portion, the essential oil. Its taste resembles that of mastic; it is agreeable and free from the bitterness and acridity of the pinaceous turpentines.—P.J. 1880,854,271.

Mistura Terebinthinæ Chiæ.

Ethereal Solution of Chian Turpentine (1oz. in 2 fl. oz. Pure Ether)	15 minims.
Mucilage of Acacia ...	2 drachms.
Syrup	30 minims.
Sublimed Sulphur	2½ grains.
Distilled Water to	1 ounce.

Dose.—One ounce three times daily.—L. i./80,478 P.J. 1880,854.

Pilula Terebinthinæ Chiæ.

Chian Turpentine	3 grains.
Sublimed Sulphur	2 grains.

Make 1 pill: dose, 2 every 4 hours.

Pilula Terebinthinæ et Zinci, L.H.

Chian Turpentine	4 grains.
Sulphate of Zinc	1 grain.

Make 1 pill: dose, 1 to 3 pills.

References.

Cases of cancer of the female generative organs successfully treated by Chian turpentine.—L. i./80,477; Pr. xxv.45; L. ii./81,1033.

Correspondence on above.—L. i./80,582; L. ii./80, 533,955; L. i./81,155.

Summary of correspondence.—M.R. 1880,446.

Its failure in the treatment of cancer.—L. i./80,1019; L. ii./81,1155.

Pharmaceutical preparations of.—P.J. 1880,854.

Letter on production of.—L. ii./80,588; P.J. 1880,271.

Sarcoma, case of, benefited by.—L. i./82,866.

solution at the top and the urine below, if albumen be present. It has also been suggested as a test for sugar in urine, as solution of glucose, if boiled with picric acid and solution of potash, reduces the yellow picric acid to deep red picramic acid, forming picramate of potassium, the depth of colour depending on the amount of sugar present.— L. ii./82,737,869,898,959,1002,1053,1095; L. i./83,161,454; B.M.J. i./83,505.

The administration of alkaloids may cause urine to give a precipitate with picric acid, but this is redissolved on heating to the boiling point.—B.M.J. i./84,103,219.

Test Papers are prepared for testing urine for albumen impregnated with Potassio-Mercuric Iodide, Potassium Ferrocyanide, Potassio-Mercuric Iodo-Cyanide, and Sodium Tungstate; and compound papers impregnated respectively with Picric Acid combined with Citric Acid, Sodium-Tungstate with Citric Acid, and Potassio-Mercuric Iodide with Citric Acid. (The last can be had for qualitative testing, and for quantitative estimation by a comparative opacity method.)—L. i./83,139,190; Pr. xxxii,91.

Nessler's Solution for Ammonia.

Iodide of Potassium ... 50 grammes.
Boiling Distilled Water ... *q.s.*

Add to above a boiling hot concentrated aqueous solution of

Perchloride of Mercury ... *q.s.*

Until the red precipitate formed is no longer redissolved on agitation. Decant, filter, and add

Caustic Potash ... ... 200 grammes.
In Distilled Water ... ... *q.s.*

To dissolve it. When cold, dilute with

Distilled water to ... ... 1 litre.

On the addition of this test to ammonia or a ammonium salt in solution, it lets fall a brown precipitate of Dimercuric-ammonium Iodide.

Phenolphthaleïn, a combination of phenol with a benzine derivative, in yellowish granular crystals. This forms

Solutio Phenolphthaleïni, P.G.

One part in diluted spirit, Sp. Gr. 0·894, 100 parts; is a colourless solution, but is turned to a purple red colour if added to a liquid containing an excess of alkali.

This, again, is immediately decolorised by excess of an acid. It is not suited for ammonia estimation.

Tropæoline OO, and Methyl-Orange (Sulpho-benzene-azo-dimethylamine) have also been suggested as tests for the presence of free acids. They form yellow solutions; the colour of the solution of the former is changed to crimson by acids, that of the latter to pink, but no change of colour is produced either by carbonic acid, acid carbonates, or solutions of metallic salts.—Chem. News, ii./81,288; i./83,123; P.J. 1882,273.

Sodium Hypobromite, Solution of, see p. 242.

Sonstadt's Solution for Testing Gems.

Red Iodide of Mercury	...	3720 grains.
Iodide of Potassium	...	2830 grains.
Distilled Water ...	...	15½ drachms (fluid).

Dissolve and filter. Has Sp. Gr. 3. Used to test the specific gravity of gems. Quartz and Rock Crystal float in it, Diamond Sp. Gr. 3·5, Topaz Sp. Gr. about 3·5 and Zircon Sp. Gr. 4· to 4·75, sink in it. Phœnakite Sp. Gr. 3· is suspended in it. A solution having Sp. Gr. 3·36 may be made by using Iodide of Sodium in place of Iodide of Potassium.

THEINE.

Dose.—½ to 5 grains and more; as much as 18 grains is recommended for a dose; given in solution or in pills with glycerine of tragacanth.

A crystalline principle obtained from Tea, the leaves of *Thea Bohea*, &c., in slender needles like white silk, soluble 1 in 100 of water, 1 in 25 of rectified spirit, insoluble in absolute alcohol. It has a bitter taste, is a feeble base, and forms unstable salts with acids, and is identical with Caffeine, p. 63. In moderate doses it causes reflex excitability of nerves, and increases blood pressure, and frequency of pulse. It is given for hemicrania.

It is a tonic and stimulant, it has the effect of quinine with wine, with this advantage, that it is followed by no depression.—M.T.G. i./75,185.

THEOBROMINE.

Dose.—1 to 5 grains.

An organic base existing in cacao seeds,—*Theobroma Cacao*. It is a white crystalline powder, sparingly soluble in water, alcohol and ether... It is allied to Caffei being chemically viewed as dimethyl-xanthine, and Caffeine as trimethyl-xanthine.—See Caffeine, p. 63.

THUJA.

Arbor Vitæ.

From the young shoots of *Thuja occidentalis*, a tincture is prepared equal in strength to one of the dried tops in 10 of 20 O.P. spirit.

Dose.—2 to 5 minims.

Like savine, Thuja has an irritating action on the skin, and has been employed to remove warts and fungoid granulations from ulcers; internally for amenorrhœa, pulmonary catarrh, and worms.

THYMOL.

Dose.—½ to 2 grains, up to 20 to 30 grains taken daily, in pills with powdered soap and a trace of spirit, or in oily or aqueous solution.

A stearoptene contained in oil of thyme, *Thymus vulgaris*, but principally obtained from the oil of the fruit of *Ptychotis Ajowan*. In large transparent rhomboidal crystals melting at 111° F. and having the odour of thyme, an aromatic peppery taste, is caustic to the skin and very irritating to the mouth and mucous membrane generally. Soluble 1 in 800 of water, soluble in fats and oils and freely so in alchohol, ether, acetic acid, and caustic alkaline solutions. Thymol has been synthetically prepared from Cuminol, a constituent of oil of cumin. Thymol rubbed with an equal weight of Menthol forms an oily liquid (see Menthol); with 3 parts of Thymol and 2 Chloral Hydrate, equal parts of Thymol and Camphor, and equal parts of Thymol and Carbolic Acid, similar liquefactions take place.

Thymol is a powerful antiseptic and antiputrefactive; its preparations have been much used, like carbolic acid for surgical dressings.

Liquor Thymol.

One part of Thymol dissolved in 800 of warm water forms an agreeable antiseptic lotion and disinfectant for the sick room, suitable for spraying into the air or sprinkling on the floor.

Volckmann's Thymol Solution.

Thymol	1
Alcohol	20
Glycerine	20

Dissolve and add to

Water	1000

Used as a spray and antiseptic lotion; does not produce eczema as carbolic lotion does.—Br. ii./79,xlviii.; Pr. xvii.203.

Soaps of Thymol are prepared for toilet use, containing about 1 in 1000: if used of this strength to the face the Thymol is irritating to the conjunctiva.

Spiritus Thymol.—*Dose*, 3 to 15 minims.

Thymol 1, Rectified Spirit, *q.s.* to 10; is convenient for dispensing, and for medicating the wool of antiseptic respirators.

Thymol Gauze, Carbasus **Thymol.**

Thymol	16
Spermaceti	500
Resin	50

Cotton gauze is impregnated with this mixture, liquefied by heat, so as to increase its weight 50 per cent. and contain 1 per cent. of Thymol.

Is used as an antiseptic dressing like carbolic gauze.

Pastillus Thymol is prepared, containing $\frac{1}{32}$ of a grain.—See p. 141.

Unguentum Thymol.

Is made 5 to 30 grains to the ounce of Vaseline, Petroleum Cerate, or Lard, the strength depending on the purpose for which it is applied. It is important the Thymol should be dissolved in the basis by the aid of heat, and not made by simple mixture, as particles of undissolved Thymol produce great irritation; 10 grains dissolved in an ounce of Vaseline applied to the skin keeps off gnats, mosquitoes, &c.

Vapor Thymol, T.H.

Thymol	6 grains.
Rectified Spirit	1 drachm.
Light Carbonate of Magnesia	3 grains.
Water to	1 ounce.

A teaspoonful to a pint of water at 140° F. for inhalation; useful in pharyngitis and laryngitis when associated with exanthemata.

References.

1 in 1000 of saccharine solution stops fermentation.—Pr.xx.278.

Physiological properties and use in diabetes and catarrh of the bladder in dose of $\frac{1}{2}$ to $1\frac{1}{2}$ grains.—Pr. xxii.52.

A powerful germicide and antiseptic. Renders sterile a cultivating liquid containing 1 part of Thymol in 2000. —B.M.J. i./78,2.

In skin diseases a stimulant ointment 5 to 20 grains to the ounce of vaseline or lard is useful in the later stage of eczema, and dry later stages of psoriasis, and as a parasiticide in those of a fungoid nature.—B.M.J. i./78,225; Br. i./78,199.

Use as an antiseptic in uterine affections.—B.M.J. i./78,535.

As an external antiseptic application to wounds.—T.M.G. i./78,227.

In ozœna, use as a gargle and nasal injection.—B.M.J. ii./79,692.

In chronic eczema and as a parasiticide 20 grains to an ounce of vaseline most useful; the solution diluted as a mouth wash removes the smell of tobacco, and the soap is recommended for dandriff and in nursery generally. —B.M.J. i./79,14.

Chemical properties and uses.—P.J. i./78,391.

Ringworm of the scalp, recommended and used with success, 1 part Thymol in 4 volumes of chloroform and 12 volumes of olive oil.—L. i./81,241.

In burns, these washed and sprayed with Thymol Solution 1 in 1000 and painted with Thymolised Linseed Oil 1 in 100, the latter when absorbed reapplied so as to prevent contact with the air, yielded most favourable results.—Pr. xxvii.268.

Thymol 1, Ether 10, and Spirit 5, or Thymol 1, Petroleum Oil 18: used as pigments in ringworm of the scalp, whilst acting as parasiticides they dissolve the fat, loosen the hairs, and thus help epilation.—B.M.J. i./82,901.

TONGA.

A special preparation recommended for the cure o neuralgia.

Dose.—1 to 2 drachms in water 3 times a day.

It is a dark brown liquid, the active portion of which is obtained from the scraped stem of *Epipremnum mirabile*, or *Rhaphidophora vitensis*, an araceous creeper, native of the Fiji Islands; the bark of *Premna Taitensis* one of the *Verbenaceæ*, is also used in its manufacture.—P.J.1880, 770,849,889; L.i./81,84; B.M.J. ii./81,171.

Use in neuralgia, does not affect the pupil or produce toxic symptoms.—L. i./80,360,445,835.

The writer has prepared from *Arum maculatum*

Succus Ari.

Dose.—1 drachm.

This, a medical friend informed him, relieved an obstinate case of neuralgia in which Tonga was a useful but expensive medicine.—B.M.J. i./81,908.

TRAGACANTHA.

Tragacanth (*Off.*).

Dose.—2 to 10 grains or more.

Preparations.

Glycerinum Tragacanthæ, T.H.

Tragacanth, in powder ...	60 grains.
Glycerine	½ ounce.
Water	1½ drachm.

Mix and heat for 10 minutes in a water bath.

Forms a useful pill excipient.—See p. 214.

Mucilago Tragacanthæ (*Off.*).

Dose.—1 drachm to 1 ounce, or more.

Improved formula suggested by the writer.—P.J. 1870,520.

Rectified Spirit ... ... 90 minims.

Put in a 20 ounce dry bottle and add

Tragacanth, in powder ... 60 grains.

Shake till evenly moistened and add

Distilled Water ... ... 10 ounces.

Shake again quickly to make a uniform mucilage. This keeps much better than mucilage of acacia—does not quickly turn sour, and is much more viscous. One part to 3 of aqueous fluid will suspend heavy insoluble powders.

Pulvis Tragacanthæ Compositus (*Off.*).

Tragacanth 1, Gum Acacia 1, Starch 1, and Sugar 3.

Dose.—10 to 60 grains. Is used as last preparation, 10 grains to 1 oz., but mixtures containing it do not keep so well.

TRIMETHYLAMINA.

Trimethylamine.

Syns.—SECALIN ; PROPYLAMINE (?).

Dose of the solution.—20 to 60 minims every 2 to 4 hours.

A solution of this compound ammonia, containing commercially from 10 to 20 per cent. of it dissolved in water was, under the incorrect name of Propylamine, first employed medicinally for the cure of articular rheumatism by Awenarius, of St. Petersburg, in 1854. He reported 250 cases, and affirmed it dissipated the fever and pain of the acute disease in a day or two. Medicinal Trimethylamine is obtained principally by distilling herring brine or stale fish with lime, and purifying the distillate. It was first obtained by the action of a caustic alkali on ergot, and named Secalin. It has been abstracted from the leaves of common beet and stinking goosefoot, the flowers of hawthorn and arnica, and by heating codeia with potassa, as well as from guano and some other animal substances. The commercial preparation (20 per cent.) is alkaline, colourless, has a strong, herring-brine odour, and is miscible with water. Its taste may be disguised by sweetened peppermint water or syrup of orange-peel. The salt,

Trimethylaminæ Hydrochloras,

Dose.—2 to 3 grains, 3 to 5 times a day,

Is obtained by neutralising the solution with hydrochloric acid and evaporating to crystallization. It is in deliquescent prismatic crystals, very soluble in water, has a slight fishy odour and a pungent, saline taste; may be given in solution, but more agreeably in a pill with powdered althæa root and glycerine of tragacanth, and covered with sandarach solution.

In acute rheumatism, given with excellent effects, especially when begun early.—Pr. x.385.

Results of 32 hospital cases; it is a cardio-vascular sedative, limiting nutrition, and promoting expectoration, useful in acute attacks of rheumatism.—Pr xxiii.365.

Acute articular rheumatism, 7 cases quickly cured by it.—B. F. M. Ch. Rev. i./73,497.

Physiological experiments, it increases functions of the cord and accelerates the heart's action; poisonous doses kill by cardio-pulmonary asphyxia.—M.T.G. ii./74,240.

Employed in 14 cases of acute rheumatism with success, also of value as a liniment; 1 to 3 of glycerine for rheumatic pains.—M.R. 1875,25.

Four cases of rheumatism and gout treated by it.—Br. i./75,46.

Editorial note on 28 cases of acute rheumatism treated by gramme doses of solution every 2 hours, results good. —L. i./75,67.

VERATRIA (*Off.*).

Veratrine.

Dose.—$\frac{1}{70}$ to $\frac{1}{16}$ grain, in a pill carefully triturated with sugar of milk and glycerine of tragacanth. An alkaloid, not quite pure, obtained from the seeds of *Asagræa officinalis*—Sabadilla or Cevadilla seeds; in white or greyish white pulverulent masses; it powerfully irritates the nostrils and excites sneezing; taste bitter and acrid. Nearly insoluble in water; soluble 1 in 11 rectified spirit; 1 in 6 ether; readily and almost completely soluble in diluted acids (a little resin is left). It poisonous, but has been used as an anti-pyretic and arterial sedative in fevers and acute inflammations—resembles Aconitia in its general effects—irritates mucous membranes, causes sneezing, pricking and twitching of the skin, given in large doses it causes vomiting and purging; sometimes given for neuralgia, spasm, rheumatism and gout, but its principal use is externally in the form of ointment for the relief of neuralgic pains.

Oleatum Veratriæ, U.S.

Veratria	2
Oleic Acid	100

Dissolve. Useful for neuralgia.

Unguentum Veratriæ (*Off.*).

Veratria	8 grains.
Olive Oil	30 minims.

Rub together and add

Prepared Lard	1 ounce.

Mix. It excites a sensation of warmth and pricking, followed by coldness; if applied for some time, it will produce a red rash. Like aconitia ointment, than which it is much cheaper, it is useful for facial neuralgia. The ointment is often made stronger, 20 to 40 grains to the ounce, and then it proves very useful in the treatment of sciatica, rubbed into the painful part for 20 to 30 minutes, 2 or 3 times a day, also useful in the neuralgic pain consequent on shingles.

References.

In neuralgia and nervous diseases $\frac{1}{16}$ grain twice a day does good, also relieves palsy from cold.—L. i./48,501.

Physiological action.—M.T.G. ii./60,295, and R.

Relieves toothache applied locally.—L. i./62,54.

Researches on the action of Veratria on man and other animals, hypodermic injection painful on man, lowers the tension of the circulatory system and makes pulse irregular, feeble, and intermittent, tried for pneumonia.—Rank. i./70,143.

Physiological effects.—Rank. ii./72,125,126.

Alcoholic tremor, and that of sclerosis were relieved by $\frac{1}{180}$ grain doses four times a day.—L. ii./83, 118.

Internally and externally, recommended for pruritus. —M.T.G. i./84,509.

VERBASCUM THAPSUS.

Great Mullein.

This indigenous scrophulariaceous plant is much used as a household remedy on the Continent, and a sweetened decoction in milk, 1 in 5 of fresh leaves or about 1 in 40 of dried, is employed in Ireland in incipient phthisis for its weight increasing and curative power.—P.J. 1883, 309.

Smoking the dried leaves controlled racking cough in a case of phthisis.—B.M.J. i./84,664.

Tinctura Verbasci.

Dose.—20 to 60 minims. 1 in 8 of proof spirit.

ZINCI BROMIDUM.

Bromide of Zinc, U.S.

Dose.—3 to 10 grains, in water well diluted.

A white granular powder, very deliquescent, odorless, having a sharp saline and metallic taste, and a neutral reaction, very soluble in water and alcohol. As both bromides and zinc salts have been used with success in epilepsy, this salt has been given with the intent of combining the action of both.

Reference.

Bromide of Zinc is borne badly, although Zinc unquestionably deserves some of the repute it has enjoyed as an anti-epileptic.—B.M.J. i./80,548.

ZINCI CHLORIDUM.

Chloride of Zinc (*Off.*).

Syn.—BUTTER OF ZINC.

Preparations.

Collodium Zinci Chloridi.—*See* p. 96.

Liquor Zinci Chloridi (*Off.*).

Four minims of this solution = 3 grains of solid Chloride of Zinc. On diluting this Liquor, or making a solution of the salt, with water, generally a white precipitate (Basic Oxychloride) is formed, which may be redissolved by adding a trace of hydrochloric acid.

Chloride of Zinc is a powerful caustic, antiseptic and antiputrescent. The Liquor, or an impure solution known as Sir W. Burnett's Disinfecting Fluid, is a powerful deodorising antiseptic solution; it is odorless (but *very poisonous*) and specially useful for disinfecting the utensils, &c., in the sick-room of fever patients; it quickly permeates or disintegrates all organic matter *with which it comes in contact.*

Caustica Zinci Chloridi, R.O.H.

Chloride of Zinc, in powder Oxide of Zinc	equal parts.

If carefully kept in a stoppered bottle, this powder can be insufflated into any cavity requiring it.

Pasta Zinci Chloridi (Mid. Hosp.)

Chloride of Zinc ...	...	16	ounces.
Opium, in Powder	...	1½	„
Hydrochloric Acid	...	6	drachms.
Boiling Water ...	to	1	pint.

Macerate the Opium in 12 ounces of the water for 12 hours, add the acid and filter, dissolve the Chloride of Zinc in the filtered liquid, and add water *q.s.* to produce 1 pint.

To above solution...	...	1 ounce.
Wheaten Flour ...	...	120 grains.

Mix and heat in a water bath until of a proper consistence. It is used as a caustic for cancerous sores, spread on lint, one or more layers being used. Weaker and firmer applications containing more flour are also used. Chloride of Zinc pounded with an equal weight of oil of theobroma is sometimes used, and may be formed into darts, spear or rod-shaped, for insertion into wounds or sores.

Solutio Zinci Chloridi Antiseptica.

Chloride of Zinc ...	...	40 grains.
Distilled water ...	...	1 ounce.

This solution produces such an antiseptic effect upon the tissues of a recent wound, that, as the result of a single application, the cut surface, though not presenting any visible slough, is rendered incapable of putrefaction for 2 or 3 days, notwithstanding its exposure to septic influence. It is particularly useful in tongue cases, after the removal of tumours of the jaws, or operations about the anus, and after amputations or excisions in parts affected with putrid sinuses; it is freely applied on a piece of lint to all textures including bones, and injected into sinuses.—B.M.J. ii./68,53.

Chloride of Zinc has the property of rendering a wound antiseptic which has already become septic. An 8 per cent. solution is more energetic than a 5 per cent. solution of carbolic acid, and is useful in checking parenchymatous hæmorrhage after operations. — M.R. 1882,405.

Lotio Rubra, U.C.H.

Sulphate of Zinc	2 grains.
Compound Tincture of Lavender	15 minims.
Water	to 1 ounce.

Sulphate of Zinc is moulded into points for intrauterine medication. Points of equal parts sulphate of zinc and alum, and of sulphate of copper are also made.

The two following salts of zinc have been used for epilepsy.

Zinci Citras.

Dose.—3 to 12 grains or more.

An amorphous white powder with a sharp metallic taste, not perfectly soluble in water, as it is a basic salt.

Zinci Lactas.

Dose.—3 to 30 grains, increased as it can be borne.

It is generally met with in white crystalline crusts, with a sharp metallic taste, freely soluble in water but insoluble in alcohol. This Salt least deranges the stomach, and has been much used in France for epilepsy.

Oleatum Zinci.—See p. 192.

Zinci Phosphidum.—See p. 205.

Zinci Sulpho-Carbolas.—See p. 14.

Zinci Valerianas. (*Off.*).

Dose.—1 to 3 grains in a pill with mucilage of acacia.

The Crystallized Salt is preferred, and pills containing 3 grains in each are generally kept prepared.

APPENDIX.

I.

ANTISEPTIC APPLICATIONS AND SURGICAL DRESSINGS.

	PAGE
Bandages,	
Carbolic Gauze, 6 yd. rolls, 5 in. wide	8
Domette (flannel) 6 yd. rolls, 3 in.	
Elastic, Circular Stocking, 2½ in., 3 in., and 3½ in.	
Elastic, India Rubber Webbing, 1 in., 2 in., and 3 in.	
Eucalyptus Gauze, 6 yd. rolls, 5 in.	118
Selvedge, or Fast Edge, 6 yd. rolls, 2 in., 2½ in., and 3 in.	
Silicated	244
Water Dressing, plain 6 yd. rolls, 2 in., 2½ in., 3 in. 4 in.	
Catgut, Carbolised, in bottles with Carbolic Oil, Nos. 0, 1, 2, 3...	9
„ **Chromic,** Nos. 0, 1, 2, and 3	15
Drainage Tubes. India Rubber, perforated, of various dimensions	
Gauze, Carbolic Acid, 6 yd. pieces	8
„ Eucalyptus, 6-yd. pieces	118
„ Thymol, 6 yd. pieces	257
Jaconet, Pink Macintosh or Hat Lining	10
Lint, Surgeon's Nos. 0, 1, 2, and 3 (finest)...	
„ Boracic, 1 lb. packages, 2 oz. and 4 oz. boxes	3
„ Marine, 1 lb. tins	218
Lotion, Boracic Acid, saturated	3
„ Carbolic Acid, 1 in 20...	
Oil, Carbolised, 1 in 10, or 20	
„ „ for Catheters...	
Oiled Silk Protective	10

Plasters, Spread, PAGE
Adhesive, on unglazed Calico, yard rolls ... ...
,, Union, ,, ,, ...
,, Moleskin, ,, ,, ...
,, Tapes, Unglazed Calico, Holland Silk, and Waterproof ... ...
India Rubber Adhesive, 7 in. wide, yard rolls ...
,, ,, ,, ,, ,, 5 yd. rolls ...
,, ,, ,, Porous, yard rolls ... ...
,, ,, ,, Twilled Linen, yard rolls...
Isinglass on Muslin, 7 in. wide, yard rolls ... ...
,, ,, 11 in. wide, 5 yard rolls... ...
,, Silk, Flesh, White, and Black, yd. rolls
,, Gold Beaters' Skin, 6 in. wide yd. rolls ...

Sponges, Carbolised ... ...

Silk Ligatures, Carbolised, reels ... ...
,, Salicylic ½ lb. boxes ... ...

Tenax, Carded Oakum, 1 lb. packages 218
Sublimate Wood Wool, for wound dressing. (*Fine wood fibre impregnated with ½ per cent. of Perchloride of Mercury*).—L.ii./83.908. 147
Tow, Flax, (about) ½ lb. rolls ... ...
,, ,, Carbolised, ½ lb. packages 9
,, Jute, (about) 1 lb rolls ... ...
,, ,, Salicylic, ½ lb. packages... ... ...

Wool, Prepared Cotton, finest, 1 lb. packages, 1 oz., 2 oz., and 4 oz. boxes 144
,, Prepared Cotton, second, 1 lb. packages 144
,, Absorbent, 1 lb. ,, 1 oz., 2 oz., and 4 oz. boxes 144
,, Absorbent Gauze and Cotton Wool Tissue, 1lb. packages 144
,, ,, Balls (in place of sponges) 144
,, Boracic Acid, 1 lb. packages ... ...
,, Carbolised, 1 lb. packages 9
,, Iodoform, 10, 4, and 50 per cent., ½ lb. and ¼ lb. packages 155
,, Salicylic Acid, 4 per cent., 1 lb. and ½ lb. packages 28

II.

HISTOLOGICAL PREPARATIONS FOR STAINING, HARDENING AND MOUNTING MICROSCOPIC OBJECTS.

Acid, Acetic.
- **,, Carbolic. Puriss. No. 1.**
- **,, Chromic.**
- **,, Osmic.*** ***Syn.***—**(Hyperosmic Acid, Perosmic Acid, Tetroxide of Osmium). Gramme tubes.**
  - **,, ,, Solution 1 per cent.**
- **,, Picric.**

Alcannin.

Alcohol Absolute, S.G. 795.

Alizarine.

Ammonium Chromate.
- **,, Bichromate.**

Aniline, Liquid (*Phenylamine*).

Aniline Colours.
- **Bleu de Lyon.**
- **Blue, Methylene.**
  - **,, Nicholson's.**
  - **,, Pure Soluble.**
- **Brown, Bismark.**
- **Chrysoidine.**
  - **,, Saturated Solution.**
- **Citronine, Soluble in Spirit.**
- **Eosine.**
- **Fuchsine (Monohydrochlorate of Rosaniline).**
  - **,, and Aniline, for Bacilli.**
  - **,, Methylene Blue and Aniline (for use without Nitric Acid).**
- **Green, Iodine.**
  - **,, Malachite.**
- **Magenta (Roseine Fuchsine).**
  - **,, and Aniline Solution, for Bacilli**
- **Nigrosine.**
- **Purple, Spiller's.**

*** This acid has recently been used, hypodermically, for neuralgia; and for strumous glands, sarcoma and cancer. *Dose.*—3 m. of 1 per cent. solution, daily—L. ii./83,919; Pharm. Post. xvi.537; Pr.xxxi.207.**

Aniline Colours (*continued*).

Rosaniline, Acetate.
" Monohydrochlorate.
" Nitrate.
Rubin, S.
Saffranine.
Scarlet, Atlas.
Sloeline (Blue Black).
Vesuvine.
Violet Methyl, Dahlia.
" " Gentian.
" " 5 B.
" " 6 B.

Asphalt Solution.
Benzol, Genuine Purified.
Cacao Butter.
Canadian Balsam.
" " dried and dissolved in Benzol.
" " " " Chloroform.
Carmine.
" Solution.
Chloroform.
Creasote, Anhydrous.
Dammar Varnish.
Glycerine, pure distilled.
Glycerine Jelly.
Gold Chloride.
Hæmatoxylin.
Indigo-Carmine, in Powder.
Kleinenberg's Hæmatoxylin Solution (Alcoholic).
Logwood Staining Solution (Aqueous).
" Extract, pure.
Mayer's Solution.
Mounting Solution (Farrant's).
Oil of Cloves, pale.
" Turpentine, Rectified.
Pasteur's Fluid, with or without Sugar.
Phloroglucin.
Picrocarmine Solution.
Potassium Chromate.
" Bichromate.
Prussian Blue, Soluble.
Purpurine.
Schultz's Solution.
Silver Nitrate, Cryst.
Zinc Cement.

INDEX AND POSOLOGICAL TABLE.

THIS index includes not only the name and adult dose of each drug and preparation described in the foregoing pages, but also those of official drugs and preparations to which a dose is assigned by the British Pharmacopœia. The official names are printed in italics. Where no number of the page is inserted, the drug or preparation is not elsewhere mentioned. Lists of Formulæ for **Bougies, Granular Effervescent Preparations, Hypodermic Injections, Pessaries, Pills, Suppositories,** and **Lozenges** are added in alphabetical order.

NAME.	DOSE.	PAGE
Abrus Precatorius		1
Absolute Phenol	1 to 3 gr.	7
Absorbent Powders		167
A.C.E.		82
Acetum Cantharidis, 1 in 10		72
„ *Scillæ*	15 to 40 m.	
Acidulated Brine Test		252
Acidum Aceticum	5 to 15 m.	
„ *Aceticum Dilutum*	1 to 2 dr.	
„ *Aceticum Glaciale*	2 to 5 m.	
„ *Arseniosum*	1-60 to 1-12 gr.	
„ *Benzoicum*	3 to 15 gr.	1
„ Boracicum	5 to 30 gr	3
„ Boricum, syn.	5 to 30 gr.	3
„ *Carbolicum*	1 to 3 gr.	7
„ Carbolicum Liquidum	1 to 3 m.	8
„ Catharticum	4 to 8 gr.	14
„ Chromicum		15
„ Chrysophanicum	1·5 to 2 grs. or more.	15
„ *Citricum*	10 to 30 gr.	
„ Fluoricum Dilutum	15 to 60 m.	20
„ *Gallicum*	2 to 10 grs. or more.	
„ Gynocardicum	½ to 3 gr.	194
„ Hydrobromicum Dilutum	20 to 60 m.	18
„ *Hydrochloricum*	2 to 10 m.	

Name.	Dose.	Page
Acidum Hydrochloricum Dilutum	10 to 30 m.	
,, *Hydrocyanicum Dilutum*	2 to 8 m.	
,, Hydrocyanicum Dil. (Scheele)	1 to 4 m.	
,, Hydrofluoricum Dilutum	15 to 60 m.	
,, Lacticum	5 to 20 m.	20
,, Lacticum Dilutum	30 to 120 m.	
,, *Nitricum*	2 to 6 m.	
,, *Nitricum Dilutum*	10 to 30 m.	
,, *Nitrohydrochloricum Dilutum*	5 to 20 m.	
,, Oleicum		
,, Osmicum, sol. 1 per cent.	3 m. daily	267
,, Phosphoricum Sp. Gr. 1·5	2 to 8 m.	
,, *Phosphoricum Dilutum*	10 to 30 m.	
,, Phosphoricum Forte	2 to 6 m.	
,, Pyrogallicum	½ to 1½ gr.	
,, Salicylicum	5 to 30 gr. or more.	
,, Scleroticum	½ to ¾ gr.	114
,, *Sulphuricum*	1 to 3 m.	
,, *Sulphuricum Dilutum*	10 to 30 m.	
,, *Sulphuricum Aromaticum*	5 to 30 m.	110
,, *Sulphurosum*	30 to 120 m.	31
,, *Tannicum*	2 to 10 gr.	
,, *Tartaricum*	10 to 30 gr.	
Aconite Leaves and Root		
Aconitia	1-240 to 1-60 gr.	
Aconitiæ Oleatum, 1 in 50		
,, Nitras		
Aconitine	1-240 to 1-60 gr.	
Actæa Racemosa		
Adepsine		
Æther	20 to 60 m.	
,, *Aceticus*	20 to 60 m.	
,, Phosphoratus		
,, *Purus*		
,, *Sulphuricus*	20 to 60 m.	
Æthyl Bromidum		
,, Iodidum		
Agaricin	1-12 to 1-6 gr.	
Agaricus Albus	10 to 30 gr.	
,, Muscarius		
Aix-les-Bains Water (Artificial)		
Albumen, Tests for		
Aldehydum Dilutum		
Alder (Black), Bark of		
Aloe Barbadensis, or *Socotrina*	2 to 6 gr.	
Aloin	1 to 4 gr.	
Althein	1 to 2 gr.	

NAME.	DOSE.	PAGE
Alum	10 to 20 gr.	
Alumen	10 to 20 gr.	
Amanita Muscaria		181
American Indian Hemp		48
Ammoniacum	10 to 20 gr.	
Ammoniæ Benzoas	10 to 30 gr.	2
,, *Carbonas*	3 to 10 gr.	
,, *Phosphas*	5 to 20 gr.	
Ammonii Bromidum	2 to 20 gr.	
,, *Chloridum*	5 to 20 gr.	43
,, Hypophosphis	1 to 6 gr.	206
,, Iodidum	3 to 20 gr.	44
Ammonio-Ferric Alum	3 to 10 gr.	130
Amyl Nitris	½ to 1 m. by mouth 2 to 5 m. inhaled	44
Amyli Iodidum	½ to 4 drs.	159
Anacardium Occidentale		46
,, Officinarum		46
Anamirtin		211
Anemonin	1-60 to 1-12 gr.	225
Anthemidis Flores		46
Anthoxanthum Odoratum		47
Antimonii Chloridum		47
,, *Oxidum*	1 to 4 gr.	
Antimonium Sulphuratum	1 to 5 gr.	
,, *Tartaratum*	Diaphoretic, 1-16 to 1-6 gr. Depressant, 1-6 to 1 gr. Emetic ...... 1 to 2 gr.	
Antiseptic Applications		265
Apiol	3 to 6 m.	48
Apocynum Cannabinum		48
Apomorphiæ Hydrochloras	1-16 to ¼ gr. by mouth 1-25 to 1-6 hypoderm.	49
Aqua Aurantii Floris	½ dr. to 2 oz.	
,, *Camphoræ*	½ oz. to 2 oz.	69
,, *Carui*	½ to 2 oz.	
,, *Chloroformi*	½ oz. to 2 oz.	83
,, *Cinnamomi*	1 dr. to 2 oz.	
,, *Fœniculi*	½ oz. to 2 oz.	
,, *Laurocerasi*	5 to 30 m.	
,, *Menthæ Piperitæ*	½ to 2 oz.	
,, *Menthæ Viridis*	½ to 2 oz.	
,, Picis	5 to 10 oz.	218
,, *Pimentæ*	½ to 2 oz.	
,, *Rosæ*	to 2 oz.	
,, *Sambuci*		
Araroba		16

NAME.	DOSE.	PAGE
Arbor Vitæ		256
Areca	2 to 6 dr.	
Argenti Nitras	1-6 to 1-3 gr.	50
Argenti Oxidum	½ to 2 gr.	
Arsenical Cigarettes		223
Ari Succus	1 dr.	259
Asparagin	1 to 2 gr.	51
Aspidospermine Sulphate		227
Assafœtida	5 to 20 gr.	
Asthma Pastilles and Powders		223
Atropia	1-120 to 1-60 or 1-16 gr.	51
Atropiæ Oleatum, 1 in 40		54
,, Salicylas	1-120 to 1-40 or 1-16 gr.	53
,, *Sulphas*	1-120 to 1-40 or 1-16 gr.	53
,, Valerianas	1-120 to 1-40 or 1-16 gr.	53
Atropine	1-120 to 1-60 or 1-16 gr.	51
Balls of Absorbent Wool		144
Balsamum Gurjunæ	½ to 2 dr.	56
,, *Peruvianum*	10 to 15 m.	
,, *Tolutanum*	10 to 20 gr.	
Bandages, Silicated		244
Baptisin	1 to 5 gr.	57
Barbaloin	1 to 4 gr.	43
Bebeeru Bark		57
Beberine, Hydrochlorate of	1 to 10 gr.	57
,, *Sulphate of*	1 to 10 gr.	57
Beech Tar		219
Beef, Essence of		123
,, Peptonised, Jelly of		196
,, Tea, Concentrated		122
Belladonna Leaves	1 to 5 gr.	57
,, *Root*	1 to 5 gr.	57
Benger's Liquor Pancreaticus	1 to 2 dr.	195
,, Liquor Pepticus	1 to 2 dr.	200
Benzoic Acid	3 to 15 gr.	1
Bichloride of Methylene		175
Birch Tar		219
Bismuthi Carbonas	5 to 20 gr.	
,, *Oxidum*	5 to 15 gr.	
,, Oxychloridum	5 to 20 gr.	60
,, *Subnitras*	5 to 20 gr.	
Black Alder		235
,, Cohosh		84
,, Snakeroot		84
Bliss' Cure		223
Blood, Desiccated		123

Name.	Dose.	Page
Blue Gum Tree		117
Boletus Laricis	10 to 30 gr.	41
Bonjean's Ergotin	1 to 3 gr.	112
Boracic Acid	5 to 15 gr.	3
Borax	5 to 40 gr.	
Boric Acid	5 to 15 gr.	3
Boroglyceride		6
Bougies, Nasal, see Buginaria		274
Bougies, Urethral, Elastic, Gelatin, 6½ n. long:—		
Belladonna, Alc. Ext., 1½ gr.		
Ext. Krameriæ, 1 gr.		
Lead Acetate, 1 gr. Ext. Opium, 1 gr.		
Tannic Acid, 1 gr.		
Zinc Acetate, ½ gr. and 1 gr.		
Zinc Chloride, ¼ gr.		
Zinc Chloride, ¼ gr. Ext. Opium, 1 gr.		
Zinc Chloride, ¼ gr Belladonna, Alc. Ext. 1 gr.		
Zinc Sulphate, ½ gr. and 1 gr.		
Zinc Sulphate, ½ gr. Belladonna, Alc. Ext., 1 gr.		
Zinc Sulphate, 1 gr. Belladonna, Alc. Ext., 1 gr.		
Zinc Sulphate, 1 gr. Ext. Opium, 1 gr.		
Sulphate of Zinc, ½ gr. Ext. Hydrastis, 1 gr. „ Belladonna, 1 gr. Carbolic Acid, ¼ gr.		
Bougies, Urethral, with Cacao Butter:—		
Belladonna, Ext. Root, ¼ gr.		
Bismuth Oxychloride, 10 gr.		
Eucalyptus Oil, 10 m.		
Iodoform, 5 gr.		
Iodoform, 5 grs. Eucalyptus Oil, 10 m.		154
Lead Acetate, ½ gr., ¾ gr., and 1 gr.		
Tannic Acid, 1 gr.		
Zinc Chloride, ¼ gr. and ½ gr.		
Zinc Sulphate, ½ gr. and 1 gr.		
Brand's Meat Preparations		122
Brine Test, Acidulated		252
Bromal Hydrate	2 to 5 gr.	61
Bromide of Ammonium	2 to 20 gr.	
„ of Ethyl		39
„ of Iron	3 to 10 gr.	123

NAME.	DOSE.	PAGE
Bromide of Lithium	5 to 15 gr.	170
„ *of Potassium*	5 to 30 gr.	
„ of Sodium	10 to 30 gr.	241
„ of Zinc	3 to 10 gr.	262
„ Hydric		18
Brucia	1-16 gr. or ½ gr.	62
Bryonia		62
Buginaria.—Nasal Bougies, Elastic Gelatin, 2¼ in. long.		
Buginarium Acidi Carbolici	½ gr.	
„ Cupri Sulphatis	1-10 gr. and 1-6 gr.	
„ Iodoformi	1-6 gr. and ½ gr.	154
„ Zinci Sulphatis	1-10 gr.	
Bullocks, Dried Blood of		123
Burnett's Disinfecting Fluid		263
Butchers' Broom Tar		219
Butter of Antimony		47
Byne		171
Caffeina	½ to 5 gr. or more.	63
Caffeinæ Citras	½ to 5 gr. or more.	63
„ Hydrobromas	½ to 5 gr. or more.	63
„ Valerianas	½ to 3 gr.	63
„ Sodio-Salicylas	1 to 4 gr.	64
Calabar Bean	1 to 4 gr.	209
Calamine		167
Calcii Chloridum	10 to 20 gr.	65
„ Lactas	1 to 5 gr.	20
„ Sulphidum	1-10 to 1 gr.	66
Calcis Carbonas præcipitata	10 to 60 gr.	
„ *Hypophosphis*	1 to 6 gr.	207
„ *Phosphas*	10 to 20 gr.	
Calendula		68
Calisaya Bark	10 to 60 gr.	85
Calumbæ Radix	10 to 20 gr.	
Cambogia	1 to 4 gr.	
Camphor	1 to 10 gr.	68
Camphor Ball		69
Camphora	1 to 10 gr.	68
„ Monobromata	2 to 10 gr.	70
„ Salicylata	1 to 5 gr.	71
Camphorated Carbolic Acid		8
„ Chalk		69
Cannabis Indica		72
Cannabin Tannas	2 to 10 gr.	72
Cantharides		73
Cantharidin		73
Cantharis	1-16 to gr.	73

Name.	Dose.	Page
Canton's Phosphorus		66
Capsaicin		74
Capsicin	1-8 to ¼ gr.	74
Capsicum Fruit	½ to 1 gr.	74
Capsules of Amyl Nitrite, 1, 2, 3, and 5 m.		44
" of Fehling's Solution, 1 c.c		252
" of Iodide of Ethyl, 5 m.		40
" of Santal Oil, 10 m.		194
Carbasus Acidi Carbolici		8
" Eucalypti		118
" Thymol		257
Carbo Animalis	20 to 60 gr.	
Carbo Ligni	20 to 60 gr.	
Carbolic Acid	1 to 3 gr.	7
" Acid Gauze		8
" Acid Soap		11
" Dressing		12
Carbolised Iodine Solution		9
" Silk		9
" Tow		9
" Wool		9
Carbon, Tetrachloride of		75
Carmine		76
Carnis Extractum		122
Carthagena Bark		86
Casca Bark		115
Cascara Sagrada		236
Cashew Nut		46
Catechu	10 to 30 gr.	
Catgut Ligatures		9, 15
Cathartic Acid	4 to 8 gr.	14
Caulophyllin	1 to 4 gr.	76
Caustica Zinci Chloridi		263
Cerasin	1 to 5 gr.	225
Ceratum Calaminæ		168
Ceratum Petrolei		135
Cereolus Iodoformi, 5 gr. et Eucalypti, 10 m.		154
Cerevisiæ Fermentum	½ to 1 oz.	
Cerii Oxalas	1 to 2 gr.	
Chalk, Camphorated		69
Chamomile Flowers		46
Charta Nitrata		222
Chartazinc		192
Chaulmoogra Oil	2 to 15 gr.	193
" Ointment		194
Chemical Food	1 dr.	128

NAME.	DOSE.	PAGE
Chian Turpentine	5 to 10 gr.	250
Chinese Oil of Peppermint		175
Chinoidinum	1 to 5 gr.	234
Chinolini Salicylas	5 to 15 gr.	77
„ Tartras	5 to 15 gr.	77
Chinolinum	3 to 10 m.	76
Chloral Hydras	5 to 30 gr.	77
„ cum Camphorâ		78
„ cum Menthol		79
„ cum Thymol		79
Chloralum		169
Chloramyl		82
Chloride of Zinc		263
Chlorodyne	5 to 20 m.	84
Chloroform, from Methylated Spirit		80
Chloroformum	1 to 10 m.	79
„ Belladonnæ, 1 in 1		58
„ Camphoratum, 2 in 3		88
Chloromorphiæ Liquor	5 to 20 m.	88
Chrisma		133
Chromic Catgut Ligatures		15
Chrysarobin	1-5 to 2 gr. or more.	15
Chrysophanic Acid	1-5 to 2 gr. or more.	15
Cigarettes, Arsenical		228
Cimicifuga		84
Cimicifugin	1 to 6 gr.	84
Cimolite		167
Cina		237
Cinchonæ Flavæ Cortex	10 to 60 gr.	86
„ *Pallidæ Cortex*	10 to 60 gr.	86
„ *Rubræ Cortex*	10 to 60 gr.	86
Cinchoniæ Hydrochloras	1½ to 10 gr.	91
„ Sulphas	1½ to 10 gr.	91
Cinchonidiæ Salicylas	1 to 10 gr.	92
„ Sulphas	1 to 10 gr.	92
Cinchonine	1 to 10 gr.	91
Clubmoss Spores		170
Coating Pills		215
Coca	30 to 120 gr.	93
Cocainæ Hydrochloras	1-6 to 1 gr.	96
Cocaine	1-8 to 1 gr.	96
Cocculin		211
Cocculus Indicus		211
Codeia	¼ to 2 gr.	96
Codeiæ Phosphas	⅓ to 2 gr.	96
Coffee		68

NAME.	DOSE.	PAGE
Cohosh, Black		84
Cohosh, Blue		76
Colchici Cormus	2 to 8 gr.	
Colchicin	1-32 gr.	95
Collodium		96
„ cum Oleo Crotonis, 1 in 8		96
„ cum Iodoformo, 1 in 12		154
„ Epispasticum		73
„ *Flexile*		96
„ Iodi, 30 gr. in 1 oz.		96
„ Salicylicum		96
„ „ cum Zinci Chorido		96
„ Stypticum		97
Colocynthidis Pulpa	2 to 8 gr.	
Collunaria.—Nasal Douches :—		
Collunarium { Acidi Carbolici 4 gr. Sodæ Bicarb. 12 gr. Boracis 12 gr. }	in 1 oz. T.H.	
„ Acidi Tannici, 3 gr. to 1 oz. T.H.		
„ Aluminis, 4 gr. to 1 oz. T.H.		
„ Potassæ Permanganatis, 1-20 gr. in 1 oz. T.H.		
„ Quiniæ, ½ gr. in 1 oz. T.H.		231
Sodæ Bicarb., 30 gr. in 1 oz. T.H.		
„ Zinci Sulphatis, ½ gr. in 1 oz. T.H.		
„ Zinci Sulphocarbolatis, 2 gr. in 1 oz. T.H.		
Columbian Bark		85
Compressed Tablets		249
Concentrated Beef Tea (Brand's)		122
Conchinin	1 to 15 gr.	234
Confectio Emblicæ	1 to 4 dr.	111
„ *Opii*	10 to 20 gr.	
„ *Piperis*	60 to 120 gr.	
„ *Scammoniæ*	10 to 30 gr.	
„ *Sennæ*	60 to 120 gr.	
„ *Sulphuris*	60 to 120 gr.	
„ *Terebinthinæ*	60 to 120 gr.	
Conia	¼ gr. increased	97
Coniæ Hydrobromas	1-3 gr. increased	97
Coniine	¼ gr. increased	97
Conquinine	1 to 15 gr.	234
Convallamarin	½ to 2 gr.	98
Convallaria Majalis		98
Convallarin	3 to 4 gr.	98
Copaiba	30 to 60 m.	
Cosmoline		133
Coster's Paste		158
Coto Cortex	1 to 8 gr.	99

NAME.	DOSE.	PAGE
Cotoin	½ to 2 gr.	99
Cotton Wool, Medicated		144
Coumarin		100
Coumarinum		100
Cream, Salicylic		27
Creasote	1 to 3 m.	101
,, Anhydrous	1 to 3 m.	101
,, Hydrated	1 to 3 m.	101
Creasotum	1 to 3 m.	101
Cremor Salicylicus		27
Cremor Zinci		136
Creta Præparata	10 to 60 gr.	
Croton-Chloral Hydrate	2 to 15 gr.	103
Cubeba	30 to 120 gr.	
Cuca	30 to 120 gr.	92
Cuprea Bark		86
Cupri Oleas		188
Cupri Sulphas	¼ to 2 gr.	
Cupric Test Pellets		252
Curara	1-20 to ½ gr.	104
Curarinæ Sulphas		104
Curdling Ferment		195, 199
Cure, Himrod's		223
Cusso	¼ to ½ oz.	
Cypripedin	1 to 3 gr.	105
Damiana		105
Daturia	1-120 to 1-16 gr.	106
Daturiæ Sulphas	1-120 to 1-16 gr.	106
Daturine	1-120 to 1-16 gr.	106
,, Heavy		52
,, Light		52, 106
Decoctum Aloes Compositum	½ to 2 oz.	
,, *Cetrariæ*	*ad lib.*	
,, *Cinchonæ Flavæ*	1 to 2 oz.	90
,, Eucalypti Gummi	2 to 4 dr.	120
,, *Granati Radicis*	1 to 2 oz.	
,, *Hæmatoxyli*	1 to 2 oz.	
,, *Hordei*	*ad lib.*	
,, *Papaveris*, 1 in 10		
,, *Pareiræ*	1 to 2 oz.	
,, *Quercus*, 1 in 16		
,, *Sarsæ*	2 to 10 oz.	
,, *Sarsæ Compositum*	2 to 10 oz.	
,, *Scoparii*	2 to 4 oz.	
,, *Taraxaci*	2 to 4 oz.	
,, *Ulmi*	2 to 4 oz.	

Name.	Dose.	Page
Delphinia	¼ to ½ gr.	106
Dialysed Iron	10 to 30 m.	126
Diastase, Malt		171
„ Pancreatic		195
Dichloride of Ethidene		115
Digitalein	1-60 to 1-30 gr.	107
Digitalinum	1-60 to 1-30 gr.	107
Digitalis Folia	½ to 1½ gr.	107
Discs of Atropine, 1-5000 gr. in each		53
Dogwood, Jamaica		217
Donovan's Solution	10 to 30 m.	
Dover's Powder (Pulv. Ipec. Co.)	5 to 15 gr.	
Duboisia		107
Duboisinæ Sulphas	1-120 to 1-30 gr.	107
Dynamite		185
Easton's Syrup	1 dr.	129
Elaterin	1-40 to 1-6 gr.	109
Elaterium	1-16 to ½ gr.	108
Elixir Acidum	2 to 8 m.	110
„ Bismuthi	60 m.	110
„ Camphoræ	30 to 60 m.	69
„ Camphoræ Monobromatæ	4 dr.	70
„ Cinchonæ	60 m.	110
„ Cocæ	1 to 4 dr.	93
„ Coto	6 to 12 m.	100
„ Guaranæ	60 m.	145
„ Phosphori	15 to 60 m.	203
„ Rubrum	20 to 60 m.	110
„ Simplex	20 to 60 m.	109
„ of Vitriol	5 to 30 m.	110
Emblic Myrabolans	1 or 2	111
Emblicæ Fructus	1 or 2	111
Emetia (Alkaloid) Expectorant $\frac{1}{100}$ to $\frac{1}{50}$, Emetic $\frac{1}{6}$ to $\frac{1}{2}$ gr.		111
Emetin (Extractive) „ $\frac{1}{30}$ to $\frac{1}{12}$, „ $\frac{1}{2}$ to 1 gr.		111
Emodin		235
Emplastrum Aconiti		34
„ Aconiti et Belladonnæ		34
„ *Belladonnæ*		58
„ Belladonnæ Extensum		58
„ *Cantharidis*		72
„ Capsici		74
„ Hamamelidis		147
„ Hydrargyri Oleatis		190
„ Rhois		237
„ Salicylicum		27
Emulsio Adipis	1 to 3 dr.	197

NAME.	DOSE.	PAGE
Emulsion of Fat	... 1 to 3 dr.	197
,, Pancreatic	... 1 to 3 dr.	196
Emulsive Ferment	... ...	195
Ergot	10 to 30 gr.	112
Ergotina	... 1 to 3 gr.	112
Ergotinine	$\frac{1}{100}$ gr.	113
Erythrophlœine	... ...	115
Erythrophlœiæ Hydrochloras... ...	... ...	115
Erythrophlœum	... ...	115
Erythroxylon Coca	30 to 120 gr.	93
Eseria	... ...	210
Eseriæ Hydrobromas	... 1-60 to 1-20	210
,, Salicylas	... 1-60 to 1-20	210
,, Sulphas	... 1-60 to 1-20	210
Essence of Beef (Brand's)	... ...	122
Essentia Anisi	10 to 20 m.	
,, *Menthæ Piperitæ*	10 to 20 m.	
Ether	20 to 60 m.	37
,, Absolute	... ...	38
,, Absolute, Methylated	... ...	38
,, Methylated	... ...	38
,, Ozonic	½ to 1 dr.	150
,, Phosphorated	... 1 to 10 m.	203
,, pure, from Methylated Spirit...	... ...	38
,, Perles of	... 1 to 4	38
,, *Sulphuric*	20 to 60 m.	37
Ethidene Dichloride	... ...	115
Ethyl, Bromide of	... ...	39
,, Chlorinated Chloride of ...	... ...	115
,, Iodide of	... ...	40
,, Oxide of	20 to 60 m.	37
Ethylate of Sodium, solution of ...	... ...	241
Ethylidene, Chloride of...	... ...	115
Eucalypti Folia	... 5 gr.	117
,, Gummi	... 2 to 6 gr.	119
Eucalyptol...	... ...	118
Eucalyptus Gauze	... ...	11
Euonymin	½ to 5 gr.	12
Extract, Pond's	... ...	14
Extractum Aconiti	½ to 2 gr.	34
,, Aconiti Radicis Alcoholicum	1-10 to 1-3 gr.	34
,, Agarici	... 3 to 6 gr.	41
,, *Aloes Barbadensis, or Socotrinæ*	... 2 to 6 gr.	
,, *Anthemidis*	... 2 to 10 gr.	46
Belæ Liquidum	1 dr. to 2 dr.	

NAME.	DOSE.	PAGE
Extractum Belladonnæ	¼ to 1 gr.	59
„ Belladonnæ Radicis	1-24 to ¼ gr.	59
„ Bynes	1 to 4 dr.	171
„ *Calumbæ*	2 to 10 gr.	
„ *Cannabis Indicæ*	¼ to 1 gr.	
„ Carnis		122
„ Cascaræ Sagradæ	2 to 8 gr.	236
„ Cascaræ Sagradæ Fluidum	10 to 60 m.	236
„ *Cinchonæ Flavæ Liquidum*	10 to 30 m.	90
„ Cocæ	5 to 15 gr.	93
„ Cocæ Liquidum	1 to 4 dr.	93
„ *Colchici*	½ to 2 gr.	
„ *Colchici Aceticum*	½ to 2 gr.	
„ *Colocynthidis Compositum*	3 to 10 gr.	
„ Convallariæ	2 to 8 gr.	98
„ Convallariæ Fluidum	5 to 15 m.	98
„ *Conii*	2 to 6 gr.	
„ Damianæ Liquidum	1 to 2 dr.	105
„ *Ergotæ Liquidum*	10 to 60 m.	112
„ Erythroxyli Fluidum	½ to 2 dr.	93
„ Eucalypti Gummi Liquidum	20 to 60 m.	120
„ *Filicis Liquidum*	15 to 30 m.	
„ Frangulæ Liquidum	1 to 4 dr.	236
„ Fuci Vesiculosi	3 to 8 gr.	132
„ Fuci Vesiculosi Liquidum	1 to 2 dr.	132
„ *Gentianæ*	2 to 10 gr.	
„ *Glycyrrhizæ*	5 to 60 gr.	142
„ *Glycyrrhizæ Liquidum*	20 to 60 m.	142
„ Grindeliæ	2 to 3 gr.	145
„ Grindeliæ Liquidum	10 to 30m.	145
„ *Hæmatoxyli*	10 to 30 gr.	
„ *Hyoscyami*	5 to 10 gr.	
„ *Jalapæ*	5 to 15 gr.	
„ Jaborandi	2 to 10 gr.	162
„ Jaborandi Fluidum	10 to 60 m.	162
„ *Krameriæ*	5 to 20 gr.	
„ *Lactucæ*	5 to 15 gr.	
„ *Lupuli*	5 to 15 gr.	
„ Malti	1 to 4 dr.	171
„ Malti Ferratum	1 to 4 dr.	172
„ Malti cum Oleo Morrhuæ	1 to 4 dr.	172
„ *Nucis Vomicæ*	1-8 to ½ or 2 gr.	
„ *Opii*	½ to 2 gr.	
„ *Opii Liquidum*	10 to 40 m.	
„ *Papaveris*	2 to 5 gr.	
„ *Pareiræ*	10 to 20 gr.	

Name.	Dose.	Page
Extractum Pareiræ Liquidum	30 to 120 m.	
„ *Physostigmatis*	1-16 to ¼ gr.	209
„ Pini Sylvestris		216
„ Piscidiæ Erythrinæ Fluidum	20 to 120 m.	218
„ *Quassiæ*	3 to 5 gr.	
„ *Rhei*	5 to 15 gr.	
„ *Sarsæ Liquidum*	2 to 4 dr.	
„ *Stillingiæ Fluidum*	15 to 60 m.	245
„ *Stramonii*	¼ to ½ gr.	
„ *Taraxaci*	5 to 30 gr.	
Fat Emulsion	1 to 3 dr.	197
Fehling's Solution		253
„ Solution, Glass Capsules of		252
„ „ Pellets of		253
Fel Bovinum Purificatum	5 to 10 gr.	
Ferments		195, 199
Ferri Arsenias	1-16 to ½ gr.	
„ Bromidum	3 to 10 gr.	123
„ *Carbonas Saccharatum*	5 to 20 gr.	
„ *et Ammoniæ Citras*	5 to 10 gr.	
„ Ammonii Sulphas	3 to 10 gr.	130
„ *et Quiniæ Citras*	5 to 10 gr.	229
„ et Strychniæ Citras	3 to 8 gr.	246
„ Hypophosphis	1 to 5 gr.	207
„ *Iodidum*	1 to 5 gr.	
„ Lactas	2 to 10 gr.	20
„ *Oxidum Magneticum*	5 to 10 gr.	
„ Perchloridum	2 to 8 gr.	124
„ *Peroxidum Humidum*	2 to 4 dr.	
„ *Peroxidum Hydratum*	5 to 30 gr.	
„ *Phosphas*	2 to 10 gr.	129
„ Quiniæ et Strychniæ Citras	to 3 10 gr.	229, 246
„ Salicylas	3 to 10 gr. or more.	26
„ *Sulphas*	1 to 5 gr.	
„ *Sulphas Exsiccata*	½ to 3 gr.	
„ *Sulphas Granulata*	1 to 5 gr.	
Ferrier's Snuff		61
Ferro-Alumen	3 to 10 gr.	130
Ferrocyanide of Potassium Papers		254
Ferrocyanic Acid Test Pellets		253
Ferrum Redactum	1 to 5 gr.	
Ferrum Tartaratum	5 to 10 gr.	
Fir Wool		216
„ Oil, and Extract		216
Fleming's Tincture of Aconite	1 to 5 m.	35
Flowers of Benjamin		1

NAME.	DOSE.	PAGE
Flowers of Camphor	1 to 10 gr.	68
Fluoric Acid		19
Formyl, Terchloride of	1 to 10 m.	79
Fossiline		133
French Chalk		167
„ Oil of Turpentine	30 m. every ½ hour	201
Fructus Emblicæ	1 to 2	111
Fuchsine	½ to 4 gr.	131
Fucus Vesiculosus		131
Fuller's Earth		167
Fumus Potassæ Nitratis		222
Fungus Laricis		41
Galbanum	5 to 15 gr.	
Galla	5 to 15 gr.	
Gamboge	1 to 5 gr.	
Gauze, Carbolic Acid		8
„ Eucalyptus		118
„ Thymol		257
Gelatum Petroleum		132
Gelsemia (Alkaloid)	1-60 to 1-20 gr.	136
Gelsemiæ Hydrochloras	1-60 to 1-20 gr.	137
Gelsemin (Eclectic)	½ to 2 gr.	137
Gelsemii Radix	5 to 30 gr.	136
Gingerin	¼ to 1 gr.	138
Glass, Soluble		243
Glonoine		184
Glycerine Jelly		139
Glycerinum	10 m. to 2 dr.	138
„ *Acidi Carbolici*, 1 to 4		9
„ *Acidi Gallici*, 1 to 4		138
„ *Acidi Tannici*, 1 to 4		138
„ *Amyli*, 1 to 8		138
„ Belladonnæ		59
„ Bismuthi Nitratis, 60 gr. to 1 oz.		139
„ *Boracis*, 1 to 4		138
„ cum Aquâ Rosæ		139
„ Ferri Dialysati	30 to 60 m.	127
„ Iodi		158
„ Olei Ricini, 1 in 2		139
„ Pepsinæ Acidum	1 to 2 dr.	200
„ Plumbi Subacetatis		140
„ Tragacanthæ		259
Glycerole of Subacetate of Lead		140
Glyco-gelatine		141
Glycyrrhiza	5 to 20 gr.	142
Glycyrrhizinum Ammoniatum	¼ to 5 gr.	142

NAME.	DOSE.	PAGE
Goa Powder		16
Gokhru		148
Golden Seal	10 to 30 gr.	148
Gossypium		144
„ Absorbens		144
„ Acidi Boracici (50 per cent.)		144
„ Acidi Carbolici		9
„ „ Salicylici (4 per cent.)		28
„ Camphoræ Salicylatæ (8 per cent.)		72
„ Iodoformi (4, 10, and 50 per cent.)		155
Granular Effervescent		
Carlsbad Salt	1 dr. or more.	
Citrate of Bismuth	„	
„ „ Caffeine	„	63
„ „ Iron	„	
„ „ Lithium	„	
„ „ Magnesium	„	
„ „ Potassium	„	
Citro-Tartrate of Soda	„	
Phosphate of Sodium	„	243
Pullna Salt	„	
Salicylic Acid	„	26
Sodio-Magnesian Aperient	„	245
Sulphate of Sodium	„	244
Vichy Salt	„	
Green Mountain Cure		223
Grindelia		144
Guarana	10 to 60 gr.	145
Guaranine	¼ to 5 gr.	145
Gurjun Balsam	to 2 dr.	56
Guttæ Atropiæ Sulphatis, 1 gr. in 1 oz.		54
„ Daturiæ, 2 gr. in 1 oz.		106
„ Eseriæ, 2 gr. in 1 oz.		210
„ Pilocarpiæ, 2 gr. in 1 oz.		164
Gynocardia Odorata		198
Gypsum		167
Haller's Acid Elixir	2 to 8 m.	110
Hamamelidin	½ to 2 gr.	146
Hamamelin	½ to 2 gr.	146
Hamamelis		146
Haustus Santonini et Olei Ricini		238
Hazeline		146
Heim's Pills		297
Himrod's Cure for Asthma		223
Histological Preparations		[illegible]
Hoffman's Anodyne		[illegible]

NAME.	DOSE.	PAGE
Homatropinæ Hydrobromas	1-120 to 1-20 gr.	56
,, Hydrochloras	1-120 to 1-20 gr.	56
,, Salicylas	1-120 to 1-20 gr.	56
Homatropine		56
Homberg's Sedative Salt	5 to 30 gr.	3
Huanuco Bark		87
Huile de Cade		219
Hydrastia (Alkaloid)	½ to 5 gr.	148
Hydrastin (Eclectic)	2 to 6 gr.	148
Hydrastis	10 to 30 gr.	148
Hydrargyri Bichloridum=Perchloridum	1-16 to 1-8 gr.	
,, Chloridum=Subchloridum	⅙ to 5 gr.	
,, Chloridum Corrosivum, U.S.=Perchloridum.		
,, ,, Mite, U.S.=Subchloridum.		
,, Cyanidum	1-20 to 1-6 gr.	
,, *Iodidum Rubrum*	1-16 to ¼ gr.	
,, ,, *Viride*	1-6 to 1 or 3 gr.	
,, *Nitrico-Oxidum*	¼ to 1 gr.	
,, Oleatum, 5, 10, and 20 per cent.		189
,, ,, cum Morphiâ		189
,, Oleo-Palmitas		190
,, *Oxidum Rubrum*	¼ to 1 gr.	
,, *Perchloridi Liquor*	30 to 120 m.	147
,, *Perchloridum*	1-16 to 1-8 gr.	147
,, *Pilula*	3 to 8 gr.	
,, *Subchloridi, Co. Pilula*	5 to 10 gr.	
,, *Subchloridum*	½ to 5 gr.	
,, Tannas	1½ gr. thrice daily	147
Hydrargyrum cum Cretâ	3 to 8 gr.	
,, Iodatum Flavum, U.S.=Iodidum Viride.		
,, ,, Rubrum, U.S.=Iodidum Rubrum.		
Hydrate of Chloral	5 to 30 gr.	77
Hydriodic Ether		40
Hydrobromic Acid, Diluted	20 to 60 m.	18
,, Ether		39
Hydrochinon		151
Hydrochloric Acid	2 to 10 m.	
Hydrocyanic Acid, diluted	2 to 8 m.	
Hydrofluoric Acid		19
Hydrogen, Peroxide of	½ to 2 dr.	149
Hydroquinone		151
Hydroxyl, Solution of	½ to 2 dr.	
Hyoscine		52, 151
Hyoscyamia	1-120 to 1-40	151
Hyoscyamiæ Sulphas	1-120 to 1-40	152
Hyoscyamine	1-120 to 1-40	52, 151

Name.		Dose.	Page
Hyperosmic Acid, sol. 1 per cent.		3 m. daily	267
Hypophosphites, Amorphous		1-8 to 3-8 gr.	151
,,	Sulphate	1-120 to 1-40	151
Hypobromite of Sodium, Solution			242
Hypophosphites			206
Hyposulphite of Sodium		10 to 60 gr.	32
Indigo-carmine Papers			252
Infusum Anthemidis		1 to 4 oz.	
,,	*Aurantii*	1 to 2 oz.	
,,	*Aurantii Compositum*	1 to 2 oz.	
,,	*Bucku*	1 to 4 oz.	
,,	*Calumbæ*	1 to 2 oz.	
,,	*Caryophylli*	1 to 4 oz.	
,,	*Cascarillæ*	1 to 2 oz.	
,,	*Catechu*	1 to 2 oz.	
,,	*Chiratæ*	1 to 2 oz.	
,,	*Cinchonæ Flavæ*	1 to 2 oz.	90
,,	*Cuspariæ*	1 to 2 oz.	
,,	*Cusso*	4 to 8 oz.	
,,	*Digitalis*	¼ to ½ oz.	
,,	*Dulcamaræ*	1 to 2 oz.	
,,	*Ergotæ*	1 to 2 oz.	112
,,	*Gentianæ Compositum*	1 to 2 oz.	
,,	Gokhru	20 oz. daily.	143
,,	Jaborandi	1 to 2 oz.	162
,,	*Krameriæ*	1 to 2 oz.	
,,	*Lini*	*ad libitum.*	
,,	*Lupuli*	1 to 2 oz.	
,,	Malti	¼ to ½ oz.	173
,,	*Maticæ*	1 to 4 oz.	
,,	*Quassiæ*	1 to 2 oz.	
,,	*Rhei*	1 to 2 oz.	
,,	*Rosæ Acidum*	1 to 2 oz.	
,,	*Senegæ*	1 to 2 oz.	
,,	*Sennæ*	1 to 2 oz.	
,,	*Serpentariæ*	1 to 2 oz.	
,,	*Uvæ Ursi*	1 to 2 oz.	
,,	*Valerianæ*	1 to 2 oz.	
Ingluvin		5 to 10 gr.	153
Injectio Acidi Sclerotici Hypodermica		3 to 5 m.	114
,,	Aconitiæ Hypodermica	1 to 4 m.	34
,,	Apomorphiæ Hypodermica	2 to 8 m.	40
,,	Atropiæ Hypodermica	1 to 4 m.	53
,,	Caffeinæ Hypodermica	1 to 3 m.	64
,,	Codieæ Hydodermica, 1 in 6	2 to 6 m.	94
,,	Coniæ Hydrobromatis Hypodermica	1 to 8 m.	97

Name.	Dose.	Page
Injectio Cotoin Hypodermica	15m.	99
,, Curaræ Hypodermica	1 to 6 m.	104
,, Ergotinæ Hypodermica	2 to 6 m.	113
,, Ergotinini, 1 in 1,000	5 to 10 m.	114
,, Eseriæ Salicylatis Hypodermica	1 to 6 m.	210
,, Ferri Perchloridi, 60 gr. in 1 oz.		125
,, Gelsemiæ Hypodermica	1 to 3 m.	137
,, Homatropiæ	1 to 6 m.	56
,, Hydrarg. Iodidi Rub., 1 in 64 Sodii Iodidi, *q.s.*	2 to 6 m.	
,, Hyoscyamiæ Hypodermica	1 to 4 m.	152
,, Iodi Hypodermica Fortissima	3 to 5 m.	158
,, Morphiæ Acetatis Hypodermica, 1 in 6	1 to 3 m.	178
,, Morphiæ et Atropiæ Hypodermica	1 to 3 m.	178
,, *Morphiæ Hypodermica* (*Off.*)	1 to 6 m.	177
,, Morphiæ Tartratis Hypodermica	1 to 6 m.	180
,, Physostigmatis Hypodermica	3 to 12 m.	209
,, Pilocarpiæ Nitratis Hypodermica	2 to 6 m.	164
,, Quiniæ Hydrobromatis Acidæ Hypodermica	3 to 12 m.	229
,, Quiniæ Hydrochloratis Acidæ Hypodermica	3 to 12 m.	230
,, Quiniæ Sulphatis Acidæ Hypodermica	4 to 18 m.	233
,, Strychniæ Nitratis Hypodermica	1 to 4 m.	247
,, ,, Sulphatis Hypodermica	1 to 3 m.	248
Insufflatio Eucalypti Gummi, ¼ gr. in each		120
,, Iodoformi, 1 gr. in each		154
Iodide of Ammonium	3 to 20 gr.	44
,, Ethyl Capsules, 5 m. in each		40
,, Starch	½ to 4 dr.	159
,, Starch, Paste of		160
Iodine		158
Iodized Phenol		9
Iodoform	½ to 3 gr.	153
,, Wool, 4, 10, and 50 per cent.		155
Iodoformum	½ to 3 gr.	153
,, Aromaticum		154
,, Precipitatum	½ to 3 gr.	153
Iodo-Glycerine Solution, 10 gr. in 1 oz.		158
Iodo-Mercurate of Potassium, Papers of		254
,, ,, ,, Solution		253
Iodo-Vaseline		156
Ipecacuanha	½ to 2 gr. expectorant 15 to 30 gr. emetic.	

Name.	Dose.	Page
Iridin (*Syn.* Irisin)	1 to 5 gr.	160
Iron Alum	3 to 10 gr.	130
,, Bromide of	3 to 10 gr.	123
,, Dialysed	10 to 30 m.	126
,, Perchloride of	2 to 8 gr.	124
,, *Phosphate of*	2 to 10 gr.	128
Jaborandi	5 to 60 gr.	161
Jalapa	10 to 37 gr.	
Jalapæ Resina	2 to 5 gr.	
Jamaica Dogwood		217
Jarisch's Ointment		23
Jequirity Seeds		1
Juglandin	2 to 5 gr.	166
Jumble Beads		1
Juniper Tar		219
Kamala	30 to 120 gr.	
Kairin	5 to 8 or 15 gr.	77
Kaolin Præparatus		166
Kola Nut		63
Kreasote	1 to 3 m.	101
Lac Sulphuris	20 to 60 gr.	248
Lactate of Calcium	1 to 5 gr.	20
,, Iron	2 to 10 gr.	20
,, Zinc	3 to 30 gr.	264
Lactic Acid	5 to 20 m.	20
,, ,, Diluted	30 to 120 m.	26
Lactopeptine	10 to 15 gr.	200
Ladies' Slipper		106
Larch Agaric	10 to 30 gr.	41
Leptandrin	¼ to 2 gr.	169
Liebig's Extract of Beef		122
Liebreich's Pepsin-Essens	1 to 2 dr.	200
Ligatures, Carbolised		9, 10
Light Atropine		53
Lily of the Valley		99
Linctus Morphiæ	60 m.	179
Linimentum Aconiti		35
,, Atropiæ, 1 in 120		53
,, *Belladonnæ*		59
,, Belladonnæ Compositum		59
,, Capsici		75
,, *Chloroformi*, 1 in 2		84
,, Crinale		73
,, *Iodi*, 1 in 8		158
Lint, Marine		218
Linteum Acidi Boracici		3

Name.	Dose.	Page
Liquor Aluminii Acetici		169
„ „ Chloridi		169
„ *Ammoniæ*	10 to 20 m.	
„ *Ammoniæ Acetatis*	2 to 6 dr.	
„ „ *Citratis*	2 to 6 dr.	
„ *Antimonii Chloridi*		47
„ *Arsenicalis*	2 to 8 m.	
„ Arsenici et Hydrargyri Hydriodatis	10 to 30 m.	
„ *Arsenici Hydrochloricus*	2 to 8 m.	
„ *Atropiæ*	1 to 4 m.	53
„ *Atropiæ Sulphatis*	1 to 4 m.	53
„ *Bismuthi et Ammoniæ Citratis*	30 to 60 m.	
„ Bituminis Compositus		14
„ *Calcis*	1 to 4 oz.	
„ „ *Saccharatus*	15 to 60 m.	
„ Carbonis Detergens		14
„ Carmini	40 gr. to 1 oz.	76
„ *Chlori*	10 to 20 m.	
„ Chloromorphiæ	5 to 20 m.	83
„ *Epispasticus*		74
„ Ergotæ Ammoniatus	10 to 60 m.	114
„ Ferri Chloroxidi	10 to 30 m.	126
„ Ferri Dialysatus	10 to 30 m.	126
„ Ferri Hypophosphitis Compositus	60 m.	207
„ *Ferri Perchloridi*	10 to 30 m.	125
„ „ *Fortior*	2 to 8 m.	125
„ „ *Pernitratis*	10 to 40 m.	
„ Gelsemiæ Hydrochloratis, 1 in 60		137
„ *Hydrargyri Perchloridi*	½ to 2 dr.	147
„ *Iodi*	5 to 30 m.	158
„ Jaborandi (Ext. Fluid)	10 to 60 m.	162
„ *Lithiæ Effervescens*	5 to 10 oz.	
„ *Magnesiæ Carbonatis*	1 to 2 oz.	
„ „ *Citratis*	5 to 10 oz.	
„ *Morphiæ Acetatis*	10 to 60 m.	178
„ „ Bimeconatis	10 to 30 m.	180
„ „ *Hydrochloratis*	10 to 60 m.	179
„ „ Sulphatis	60 m.	180
„ Nitroglycerini	½ to 2 m. or more	186
„ Pancreaticus	1 to 2 dr.	196
„ Pepticus (Benger)	1 to 2 dr.	200
„ Picrotoxini Aceticus	2 to 12 m.	212
„ *Potassæ*	15 to 60 m.	
„ *Potassæ Permanganatis*	2 to 4 dr.	223
„ *Sodæ*	10 to 30 m.	
„ „ *Arseniatis*	5 to 10 m.	

NAME.	DOSE.	PAGE
Liquor Sodæ Chloratæ	10 to 20 m.	
,, Stillingiæ Compositus	1 to 4 dr.	245
,, *Strychniæ*	4 to 10 m.	247
,, Thymol, 1 in 800		256
,, *Zinci Chloridi*, 4 m. = 3 gr.		263
Liquorice		143
,, *Compound Powder of*	10 to 60 gr.	143
Lithii Bromidum	5 to 15 gr.	170
Lithiæ Carbonas	3 to 6 gr.	
,, *Citras*	5 to 10 gr.	
London Paste		249
Lotio Acidi Benzoici		1
,, ,, Boracici		4
,, ,, Carbolici		8
,, Calaminæ		100
,, Calcii Sulphurati		67
,, Hamamelidis		147
,, *Hydrargyri Flava*		147
,, Plumbi cum Lacte		149
,, Rubra		264
Lugol's Solution	5 to 10 m.	157
Lunar Caustic		50
,, Mitigated		50
Lund's Oil		9
Lupulin	2 to 5 gr.	170
Lycopodium		170
Lytta	1-16 to ½ gr.	72
Mackintosh Sheeting		10
Magendie's Solution of Morphia, 16 gr. in 1 oz.		180
Magenta	½ to 4 gr.	131
Magnesia	10 to 60 gr.	
,, *Levis*	10 to 60 gr.	
Magnesiæ Carbonas	10 to 60 gr.	
,, *Carbonas Levis*	10 to 60 gr.	
,, *Sulphas*	1 to 4 dr.	
Malti Pulvis	1 to 2 dr.	171
Maltum		171
Manganesii Oxidum Nigrum	4 to 30 gr.	173
,, Oxidum Precipitatum	3 to 10 gr.	173
,, Phosphas	1 to 5 gr.	173
,, Sulphas	2 to 10 gr. or more	173
Manna	1 dr. to 1 oz.	
Marigold		69
Marine Lint		218
Marking Nut		46
Mass for Pessaries		143
Mastiche	1 to 20 gr.	
McDade's Mixture	1 to 4 dr.	245

NAME.	DOSE.	PAGE
Meat Extract		122
Meat Juice, Valentine's		123
„ Lozenges		122
Menispermin	1 to 5 gr.	173
Menthol	½ to 2 gr.	174
Mercurous Tannate	1½ gr.	147
Mercury, Oleate of		189
„ „ with Morphia		189
„ Oleo-Palmitate of		190
„ *Perchloride of*	1-16 to 1-8 gr.	147
„ „ „ Wood Wool		266
„ Plaster of Oleo-Palmitate		190
Metaldehyde		42
Methyl-Orange		255
Methyleni Bichloridum		175
Microscopic Object Reagents		267
Milk Peptonised		196
Mistura Ammoniaci	½ to 1 oz.	
„ *Amygdalæ*	1 to 2 oz.	
„ Amyl Nitritis	1 to 2 dr.	45
„ *Creasoti*	1 to 2 oz.	101
„ *Cretæ*	1 to 2 oz.	
„ Croton-Chloral	1 oz.	103
„ *Ferri Amara*	1 oz.	125
„ Ferri Aperiens	1 oz.	126
„ *Ferri Aromatica*	1 to 2 oz.	
„ *Ferri Composita*	1 to 2 oz.	
„ Ferri Perchloridi	1 oz.	126
„ Ferri Salina	1 oz.	126
„ *Gentianæ*	½ to 1 oz.	
„ Gentianæ Composita, P.L. {Inf. Gent. Co., 12 oz. Inf. Sennæ Co., 6 oz. Tr. Card. Co., 2 oz.}	½ to 2 oz.	
„ *Guaiaci*	½ to 2 oz.	
„ Olei Santali	1 oz.	195
„ *Scammonii*	½ to 2 oz.	
„ *Sennæ Composita*	1 to 1½ gr.	
„ *Spiritus Vini Gallici*	1 to 2 oz.	
„ Terebinthinæ Chiæ	1 oz.	251
Momordicin	1-40 to 1-6 gr.	109
Monobromated Camphor	2 to 10 gr.	70
Morphia	1-10 to ½ gr.	176
Morphiæ Acetas	1-8 to ½ gr.	177
„ Hydrobromas	1-8 to ½ gr.	178
„ *Hydrochloras*	1-8 to ½ gr.	179
„ Meconas	1-8 to ½ gr.	180
„ Oleatum, 1 in 60		176
„ Sulphas	1-8 to ½ gr.	1

NAME.	DOSE.	PAGE
Morphiæ Tartras	1-8 to ½ gr.	180
Morphine	1-10 to ½ gr.	176
Moschus	5 to 10 gr.	
Mucilago Acaciæ, 2 fl. oz.=1 oz. gum	*ad libitum.*	
,, *Amyli*, 12 gr. to 1 oz.	...	
,, *Tragacanthæ*	1 dr. to 1 oz.	269
Muscariæ Nitras	½ to ¾ gr.	181
Mynsicht's Elixir of Vitriol	3 to 10 m.	110
Myrabolanus Emblica	1 or 2	111
Myricin	2 to 5 gr.	182
Myrrh	10 to 20 gr.	
Naphthaline		182
Naphthol		182
Narceia	½ to 1 gr.	183
Narcotina	1 to 3 gr.	183
Nasal Douches—Collunaria		277
Natalóin	1 to 4 gr.	43
Nebula Acidi Lactici, 1 in 16		21
Nebula Ferri Perchloridi, 3 gr. in 1 oz.		126
Nectandra Rodiæi		87
Nepenthe=strength of Tr. Opii.	5 to 30 m.	
Nessler's Solution for Ammonia		254
New Grenada Bark		86
Nicotia	1-6 to 1 gr.	184
Nicotine	1-6 to 1 gr.	184
Nitrite of Amyl	½ to 1 m. by mouth 2 to 5 m. inhaled	44
Nitroglycerine	1-200 to 1-50 gr. or more	184
,, Solution	½ to 2 m. or more	186
,, Tablets 1-200, 1-100, 1-50 & 1-25 gr. in each		186
Nux-vomica	1 to 3 grs.	246
Oiled Silk Protective		10
Oleanodyne		188
Oleata		188
Oleate of Copper		188
,, Mercury		189
,, ,, and Morphia		189
,, Zinc		192
Oleatum Aconitiæ, 1 gr. in 50 m.		34
,, Atropiæ, 1 in 40		54
,, Hydrargyri, 5, 10, and 20 per cent.		189
,, ,, cum Morphiâ		189
,, Morphiæ, 1 gr. in 60 m.		176
,, Plumbi		191
,, Quiniæ, 1 in 4		188
,, Veratriæ, 1 in 50		261
,, Zinci		192

NAME.	DOSE.	PAGE
Oleic Acid		188
Oleum *Anethi*	1 to 3 m.	
„ *Anisi*	1 to 3 m.	
„ *Anthemidis*	2 to 5 m.	
„ Betulæ Pyroligneum		219
„ Cadinum		219
„ *Cajuputi*	1 to 4 m.	
„ *Carui*	1 to 5 m.	
„ *Caryophylli*	1 to 2 m.	
„ *Cinnamomi*	1 to 3 m.	
„ *Copaibæ*	5 to 20 m.	
„ *Coriandri*...	1 to 5 m.	
„ *Crotonis*	1-3 to 1 m.	
„ *Cubebæ*	5 to 20 m.	
„ Eucalypti...	1 to 5 m.	117
„ Fagi Pyroligneum		219
„ Gynocardiæ	2 to 15 gr.	188
„ *Juniperi*	3 to 5 m.	
„ *Lavandulæ*	1 to 5 m.	
„ *Limonis*	1 to 5 m.	
„ *Menthæ Piperitæ*	2 to 5 m.	
„ „ *Viridis*...	2 to 5 m.	
„ *Morrhuæ*	1 to 8 dr.	
„ Morrhuæ cum Quiniâ	1 to 4 dr.	188
„ „ Phosphoratum	1 to 4 dr.	203
„ *Myristicæ Expressum*	1 to 5 m.	
„ Nitroglycerini	1 to 2 m.	184
„ *Olivæ*	¼ to 1 oz.	
„ *Phosphoratum*	1 to 10 m.	203
„ Picis Rectificatum		219
„ *Pimentæ*	1 to 5 m.	
„ Pini Sylvestris		216
„ *Ricini*	1 to 8 dr.	
„ *Rosmarini*	1 to 5 m.	
„ Rusci Pyroligneum		219
„ *Rutæ*	1 to 5 m.	
„ *Sabinæ*	1 to 5 m.	
„ Santali	10 to 30 m.	194
„ *Terebinthinæ*	10 m. to 4 dr.	
„ „ Gallicum ...	30 m. every ½ hour.	201
Opium	½ to 2 gr.	
Ordeal Bark		115
Orris Root		167
Osmic Acid, sol. 1 per cent.	3 m. daily	267
Ourari	1-20 to ½ gr.	104
Oxide of Ethyl		37
Oxychloride of Bismuth	5 to 20 gr.	60
„ „ Iron		19

NAME.	DOSE.	PAGE
Oxychlorides of Zinc		263
Oxymel	1 to 2 dr.	
,, *Scillæ*	½ to 1 dr.	
Ozokerine		133
Ozone Paper		223
Ozonic Ether	½ to 1 dr.	150
Ozonized Inunction		150
Pancreas		195
Pancreatic Diastase		195
Pancreatic Emulsion	1 to 3 dr.	196
Pancreatine	2 to 4 gr.	195
Pancreatised Farinaceous Food		197
Papain	1 to 8 gr.	198
Papaverina	1-12 to 1-3 gr.	197
Papayotin	1 to 8 gr.	198
Paracoto Bark		99
Paracotoin	1½ to 3 gr.	100
Paraffin Ointment		133
Paraldehyde	15 to 50 m.	42
Paraldehydum	15 to 50 m.	42
Parrish's Chemical Food	1 dr.	128
Pasta Iodi et Amyli		160
Pasta Londinensis		242
,, Viennensis		243
,, Zinci Chloridi (Mid. Hosp.)		263
Pastilles Asthmatic		223
Pastillus Acidi Boracici, 2 gr. in each		4
Acidi Carbolici, ½ gr. in each		10
Aconiti Tincturæ, 1 m. in each		141
Ammonii Chloridi, 2 gr. in each		141
Bismuthi Carbonatis, 3 gr. in each		141
Bismuthi Carbonatis cum Morphiæ Acetate, 3 gr. and 1-40 gr.		141
Bismuthi Carbonatis cum Potassæ Chloratis, 3 and 2 gr.		141
Cocæ Extracti, 2½ gr.		93, 141
Hydrargyri Perchloridi, 1-20 gr., cum Potassæ Chloratis, 3 gr.		141
Iodoformi, 1 gr. in each		155
Morphiæ Acetatis, 1-40 gr. in each		141
Potassæ Chloratis, 2 gr. in each		141
Thymol, 1-32 gr. in each		257
Pastils		141
Paullinia Sorbilis		145
Pavy's Cupric Test		253
Pelletieriæ Sulphas	5 to 8 gr.	198
,, Tannas	5 to 8 gr.	199
Pepsin	2 to 5 gr.	199
,, Tablets, 3 gr. in each	1 with meals	200

Name.	Dose.	Page
Pepsina Amylacea	5 to 15 gr.	199
,, Porci (Beale's)	2 to 5 gr.	199
,, Saccharata	5 to 15 gr.	200
Pepsin-Essenz (Liebreich's)	1 to 2 dr.	200
Peptones		199
Peptonised Beef		200
,, ,, Jelly		196
,, ,, Suppositories		201
,, Milk		196
Perles of Apiol	1 or 2	48
,, Carbolic Acid	1 or 2	10
,, Chloroform	1 or 2	84
,, Ether, 3 m. in each	1 to 4	38
,, Monobromated Camphor, 2 gr.	1 to 3	70
,, Phosphorated Oil, 1-64 gr.	1 or 2	203
,, ,, ,, 1-32 gr.	1 or 2	203
,, Tar	1 or 2	219
Permanganates		223
Peroxide of Hydrogen	½ to 2 dr.	149
Pessaries, Gelatin Mass for		143
,, with Cacao Butter	15 gr. or 60 gr. in each	
Pessus Acidi Boracici, 10 gr.		4
,, Acidi Tannici, 10 gr.		
,, Atropiæ, 1-20 gr.		54
,, Belladonnæ Ext. Rad., ½ and 1 gr.		60
,, Bismuthi Oxychloridi, 10 gr.		61
,, Coniæ, ½ m.		97
,, Iodoformi, 5 gr.		156
,, Plumbi Iodidi, 5 gr.		
,, { Plumbi Iodidi, 5 gr. Atropiæ, 1-20 gr. }		
,, Potassii Bromidi, 10 gr.		
,, ,, Iodidi, 10 gr.		
,, Zinci Oxidi, 10 gr.		
,, ,, Sulphocarbolatis, 10 gr.		
Petrolatum		136
Petroleum		132
,, Cerate of		135
,, Jelly		132
,, Ointment		136
Phenic Acid	1 to 3 gr.	7
Phenol, Absolute	1 to 3 gr.	7
,, Iodized		9
Phenolphthaleïn		254
Phenyl Alcohol	1 to 3 gr.	7
Phosphates, Saccharated Wheat		209

NAME.	DOSE.	PAGE
Phosphorated Cod Liver Oil	... 1 to 4 dr.	203
,, Oil	... 1 to 10 m.	203
,, Suet	...	204
Phosphorus	1-260 to 1-30 gr.	201
,, Red, or amorphous	...	202
,, Perles ...	... 1-64 and 1-32 gr. in each	203
,, Pills	...	204
Physostigmatis Faba	... 1 to 4 gr.	209
Physostigmine	...	210
Physostigminæ Salicylas	1-60 to 1-20 gr.	210
Phytolaccin	... 1 to 5 gr.	211
Picric Acid Test Solution	...	253
Picropodophyllin...	...	281
Picrotoxin...	1-120 to 1-20 gr.	211
Pigmentum Chloral et Camphoræ	...	73
,, Epispasticum	...	74
,, Ferri Perchloridi Dilutum	60 gr. in 1 oz.	126
,, ,, Forte ...	120 gr. in 1 oz.	126
,, Iodi et Olei Picis...	...	150
,, Picrotoxini...	...	212
,, Plumbi	...	140
Pills	...	213
Pilocarpia...	...	163
Pilocarpiæ Hydrochloras	1-20 to ½ gr.	163
,, Nitras	1-20 to ¼ gr.	163
Pilocarpine	...	163
Pilocarpus Pennatifolius	... 5 to 60 gr.	161
Pilulæ		
Acidi Carbolici, 2 gr.	...	10
Acidi Arseniosi, 1-20, 1-30, 1-50, 1-60, 1-120 gr. ...		
Aconiti Rad., 1-8 gr.	... 1 hourly	36
Aloes Barbadensis	... 5 to 10 gr.	
,, *et Assafœtidæ*	... 5 to 10 gr.	
,, *et Ferri*	... 5 to 10 gr.	
,, *et Myrrhæ*	... 5 to 10 gr.	
Aloes Ext. Soc., 1 gr. Ext. Nucis Vom., ¼ gr. Ext. Hyoscyami, 2 gr. ...	... 1 to 2	
Aloes Ext. Soc., 1 gr. Mastich., ½ gr. S.V. R., *q.s.*	1 with dinner	
Aloes Socotrinæ	... 5 to 10 gr.	
Aloes Soc., 1 gr. Rhei, 1 gr. Mastich, 1 gr.	1 with dinner	
Aloin, 1-10 and 1 gr.	...	

Name.	Dose.	Page
Pilulæ		
Asiaticæ		
Acidi Arseniosi, 1-15 gr. Pip. Nig. ¾ gr. G. Acaciæ, *q.s.*	1 or 2 daily	
Assafœtidæ Composita	5 to 10 gr.	
Atropiæ, 1-100 gr. and 1-80 gr.	1 at bedtime	54
Belladonnæ Fol., 1-10 gr.	1 hourly	
Bismuthi Subnit., 5 gr.	1 or 2 after meals	
Blaud's Ferruginous		298
Calcii Sulphidi, 1-10 gr., 1-6 gr., ¼ gr., ½ gr., and 1 gr.		67
Calcis Phosph., 2 gr. Ferri Phosph., 2 gr. Acid Phosph., *q.s.*	1 thrice daily	
Cambogiæ Composita	5 to 10 gr.	
Camphoræ		69
,, Monobromatæ, 3 gr.		70
Catharticæ Compositæ, U.S.		
Ext. Col. Co., 1-3 gr. P. Ext. Jalap, 1 gr. Hyd. Subchlor., 1 gr. Cambogiæ, ¼ gr.	1 or 2	
Chloral Hydratis, 5 gr.	1 to 3	78
Chloral Hydratis, 5 gr. Morphia Hydrochl. 1-8 gr.	1 or 2	
Codeiæ Composita, ¼ to 2 gr.	1 thrice daily	94
Colchici Ext. Acet., ¼ gr. Opii, ¼ gr. Pil. Coloc. Co., 2 gr. Pil. Hydrarg., 1½ gr.	1 or 2	
Colocynthidis Composita	5 to 10 gr.	
,, *et Hyoscyami*	5 to 10 gr.	
Conii Composita	5 to 10 gr.	
Coniæ Hydrobromatis, 1-3 gr.		97
Creasoti, 1 in 2	2 to 6 gr.	101
Croton-Chloral Hydr., 3 gr. Gelsemiæ Hydrochl., 1-200 gr.		103
Digitalis Fol., ½ gr.	1 thrice daily	
Digitalis, Opii et Quiniæ (Heim's)		
Digitalis, ½ gr. Opii Pulv., ¼ gr. Quiniæ Sulph., 1 gr. Ipecac., ¼ gr.	1 thrice daily.	
Ergotinæ		112
Euonymin, 2 gr.		121
Ferri Carbonatis	5 to 20 gr.	
Ferri Hypophosphitis cum Strychniâ	2 or 3 daily	208
Ferri Iodidi, 1 in 3½	3 to 8 gr.	

NAME.	DOSE.	PAGE
Pilulæ		
Ferri, Quiniæ et Strychniæ Phosph. ...	2 or 3 daily	130
Ferri Sulph. Exsicc., 3 gr., 5 gr., cum Syr.	2 or 3 daily	213
Ferri Redacti, 1 gr. and 2 gr.	... 2 or 3 daily	
Ferruginosæ (Blaud's)		
Ferri Sulph., 2½ gr. Pot. Carb., 2½ gr. Tragacanth, *q. s.* ...	... 3 thrice daily	
Blaud's, (*improved, above are too alkaline*)		
Ferri Sulph, 2½ gr. Pot. Carb., 1½ gr. Sacchari, 1 gr. Tragacanth,, 1-6 gr. ...	3 thrice daily	
Gelsemin (Extractive), ¼, ½, 1 gr.	1 at bedtime	137
Grindeliæ Ext., 3 gr.	1 thrice daily	145
Hydrargyri (1 in 3), 1 gr., 2 gr., 3 gr., 4 gr., and 5 gr.		
Pil. Hydrarg., 2½ gr. Pil. Coloc. Co., 2½ gr. ...	... 1 or 2	
Pil. Hydrarg., 1½ gr. Pil. Coloc. Co., 3 gr. Ipecac., 1-3 gr. Ext. Hyoscyam., 1 gr. ...	... 1 or 2	
Pil. Hydrarg., 2½ gr. Pil. Rhei Co., 2½ gr. ...	... 1 or 2	
Pil. Hydrarg., 3 gr. Hydr. Subchlor., 1-3 gr. Ipecac., 1-3 gr. ...	... 1 or 2	
Pil. Hydrarg., 3 gr. Opii Pulv., ¼ gr. ...	... 2 or 3 times a day	
Hydrarg. cum Cretâ, 1-3 gr., ½ gr. every 1 or 2 hrs.		
Hydrarg. cum Cretâ, 2½ gr. Pulv. Ipecac. Co., 2½ gr.	... 1 or 2	
Hydrarg. Cyanidi, 1-12 gr. and 1-10 gr.	1 twice daily	
Hydrarg. Iodidi Rub., 1-16 gr....	... 1 twice daily	
Hydrarg. Iodidi Virid., 1-6 gr. and 1-3 gr.		
Hydrarg. Iodidi Virid., ½ gr. Opii Pulv., ¼ gr.		
Hydrarg. Perchloridi, 1-12 gr., 1-20 gr. and 1-40 gr.		
Hydrarg. Subchloridi. ½ gr., 1 gr., 2 gr., and 3 gr.		
Hydrarg. Subchloridi Composita (1 in 5)	... 5 to 10 gr.	
Hydrarg. Subchlor., 2 gr. Opii Pulv., 1 gr. ...	... one	
Hydrarg. Subchlor., 1 gr. Opii Pulv., ¼ gr. ...	every 4 hours	
Hydrarg. Subchlor., 2 gr. Pil. Coloc. Co., 2 gr. Ext. Hyoscyami, ½ gr. ...	1 or 2 at bedtime	
Hydrargyri Tannat. ...	1½ gr. thrice daily	147
Hydrastin, 2 gr.	... twice a day	148

NAME.	DOSE.	PAGE
Pilulæ		
Iodoformi, 2 gr.	twice or thrice a day	156
Ipecacuanhæ, 1-5 gr. and ½ gr.		
Ipecac. Co. Pulv., 5 gr.	1 or 2	
Ipecacuanhæ cum Scillâ	5 to 10 gr.	
Iridin, 2 gr.	at bedtime	161
Menispermin, 2 gr.	at bedtime	174
Morphiæ Hydrochl., ¼ gr.		
Nitroglycerini, 1-100 gr. and 1-50 gr.		184
Nucis Vomicæ Ext., 1-10 gr. and ¼ gr.		
Olei Crotonis, 1 m.		
Opii Pulveris, gr. ½ and gr.		
Pepsin, 2 gr. and 3 gr.		199
Phosphori	3 to 6 gr.	204
Phosphori (Martindale), 1-100 gr., 1-50 gr., and 1-30 gr.	after meals	204
Phosphori cum Ferro	after meals	204
Phosphori cum Ferro et Quiniâ		205
Phosphori cum Ferro et Nuce Vomicâ	after meals	205
Phosphori cum Ferro, Quiniâ et Strychniâ	,, ,,	205
Phosphori cum Quiniâ	,, ,,	205
Physostigmatis Extracti, 1-15 gr., 1-10 gr.		209
Picis Liquidæ, 2 gr.	1 or 2	219
Picrotoxini, 1-60 gr.	at bedtime	212
Pilocarpiæ Nitratis, 1-20 gr.		164
Plumbi cum Opio (P. Opii, 1 in 8)	3 to 5 gr.	
Podophyllin, 1-30 gr., 1-20 gr., 1-15 gr., ¼ gr., and 1 gr.		221
Podophyllin Composita (Resin ¼ gr.)	1 or 2 at bedtime	221
Podophyllin et Quiniæ (Resin 1-12 gr.)	with dinner	221
Potassæ Permanganatis, 1 gr. and 2 gr.		224
Quiniæ	2 to 10 gr.	
Quiniæ, 1 gr., 2 gr., 3 gr., and 4 gr.		231
Quiniæ Salicylatis, 3 gr.	every 6 hours	230
Quiniæ Sulph., 1 gr. Ferri Sulph. Exsicc., 2 gr. Ext. Belladonnæ, 1-10 gr.	1 thrice daily	
Quiniæ Sulph., 1 gr. Ferri Sulph. Exsicc., 1 gr. Ext. Cannabis Ind., ½ gr.	1 thrice daily	
Quiniæ Sulph., 1 gr. Ferri Sulph. Exsicc., 1 gr. Ext. Cannabis Ind., ½ gr. Aloes Socotrinæ, 1-3 gr.	1 thrice daily	

NAME.	DOSE.	PAGE
Pilulæ		
Rhei Composita, 2½ gr., 3 gr., 4 gr. and 5 gr.	5 to 10 gr.	
{ Pil. Rhei Comp., 2½ gr. Ext. Taraxaci, 2½ gr. }	at dinner or bedtime	
Saponis Composita (P. Opii, 1 in 5)	3 to 5 gr.	
Scammonii Composita	5 to 15 gr.	
Scillæ Composita	5 to 10 gr.	
Strychniæ,—1-100 gr., 1-36 gr., 1-24 gr. and 1-20 gr.		245
Terebinthinæ Chiæ, 3 gr.	2 every 4 hours	251
,, ,, et Zinci	1 to 3	251
Zinci Phosphidi, 1-6 gr.	thrice daily	265
,, Valerianatis, 3 gr.	,,	264
{ Zinci Valerianatis, 1 gr. Pil. Assafœtidæ Co., 2 gr. }	1 or 2	
Pine Cure		216
Pinus Sylvestris		216
Piperina	1 to 10 gr.	217
Piscidia		217
Pitayo Bark		85
Pix Liquida	2 to 10 gr.	218
Plumbi Acetas	1 to 4 gr.	
,, *Emplastrum*		191
,, Oleatum		191
,, Oleati Unguentum		191
,, Stearas		191
,, Subacetatis Glycerinum		140
Po' de Bahia		16
Podophylli Radix		220
,, *Resina*	1-30 to 1 gr.	220
Podophyllic Acid		221
Podophyllin	1-30 to 1 gr.	220
Podophyllotoxin		220
Po-ho-yo		175
Poison Oak		236
Polyporus officinalis		41
Pomegranate, Bark of Root		198
Pond's Extract		146
Potassa Sulphurata	2 to 8 gr.	
Potassæ Acetas	10 to 60 gr.	
,, *Bicarbonas*	10 to 60 gr.	
,, *Carbonas*	10 to 30 gr.	
,, *Chloras*	10 to 30 gr.	
,, *Citras*	20 to 60 gr.	
,, *Nitras*	5 to 30 gr.	222
,, *Permanganas*	1 to 5 gr.	223

NAME.	DOSE.	PAGE
Potassæ Sulphas	15 to 60 gr.	
,, *Tartras*	1 to 8 dr.	
,, *Tartras Acida*	20 to 60 or 240 gr.	
Potassii Bromidum	5 to 30 gr.	
,, Citras Effervescens	1 dr.	
,, Hypophosphis	1 to 6 gr.	208
,, *Iodidum*	2 to 20 gr.	
Potassium, Silicate of		244
Prayer Beads		1
Propylamine		260
Protective, Oiled Silk		10
Prunin	1 to 5 gr.	225
Prunus Virginiana		224
Pseud-aconitine		33
Pulsatilla		225
,, Camphor	1-60 to 1-12 gr.	225
Pulvis Antimonialis	3 to 10 gr.	
,, Bismuthi Compositus		61
,, *Catechu Co.*	20 to 40 gr.	
,, Cinchoniæ Compositus	3 to 12 gr.	91
,, *Cinnamomi Co.*	3 to 10 gr.	
,, Creasoti et Amyli		101
,, *Cretæ Aromaticus*	10 to 60 gr.	
,, *Cretæ Aromaticus cum Opio*	10 to 40 gr.	
,, *Elaterii Co.*	½ to 5 gr.	109
,, *Glycyrrhizæ Compositus*	30 to 60 gr.	143
,, *Ipecacuanhæ Co.*	5 to 15 gr.	
,, *Jalapæ Co.*	20 to 60 gr.	
,, *Kino Co.*	5 to 20 gr.	
,, Liquiritiæ Compositus	10 to 60 gr.	143
,, Lobeliæ Compositus		223
,, *Opii Compositus*	2 to 5 gr.	
,, Pectoralis (Kurellæ)	10 to 60 gr.	143
,, *Rhei Compositus*	20 to 60 gr.	
,, Salicylicus cum Talco, P.G., 1 in 33		27
,, *Scammoniæ Compositus*	10 to 20 gr.	
,, Seidlitz		245
,, *Tragacanthæ Compositus*	10 to 60 gr.	259
,, Zinci Oleatis		193
Punica Granatum		198
Pyrogallic Acid	½ to 1½ gr.	22
Pyrogallol	½ to 1½ gr.	22
Quebracho Bark		226
Quineti Sulphas	1 to 5 gr. or more	227
Quinetum	1 to 5 gr. or more	227
Quinia	1 to 4 gr.	228

Name.	Dose.	Page
Quiniæ Chloras	1 to 5 gr.	228
„ Citras	1 to 5 gr.	228
„ Hydrobromas	1 to 5 gr.	229
„ Hydrobromas Acida	½ to 2 gr. (hypod.)	229
„ Hydrochloras	1 to 5 gr.	229
„ „ Acida	½ to 2 gr. (hypod.)	230
„ Oleatum, 1 in 4		188
„ Salicylas	2 to 6 gr.	230
„ *Sulphas*	1 to 5 gr.	230
„ „ Acida	1 to 5 gr.	233
„ Sulphocarbolas	1 to 6 gr.	233
„ Valerianas	1 to 4 gr.	233
Quinidia		234
Quinidiæ Sulphas	1 to 20 gr.	234
Quinidine		234
Quinine Acid Sulphate	1 to 5 gr.	233
„ Disulphate	1 to 5 gr.	230
„ *Sulphate*	1 to 5 gr.	230
Quinoidia	1 to 5 gr. or more	234
Red Gum	2 to 6 gr.	119
Remijia Purdieana		85
„ Pedunculata		85
Resina Podophylli	1-30 to 1-15 gr. frequently ¼ to 1 gr. single dose	220
Resorcin	5 to 15 or 30 gr.	235
Rhamnus Frangula		235
„ Purshiana		236
Rhei Radix	2 to 20 gr.	
Rhein	1·5 to 2 gr. or more	15
Rhus		236
Rosaniline, Hydrochlorate of	½ to 4 gr.	131
Roseine	½ to 4 gr.	131
Rubini's Solution of Camphor	2 to 5 m.	70
Rumicin	1 to 4 gr.	237
Sabadilla		261
Sabinæ Cacumina	4 to 10 gr.	
Saccharated Wheat Phosphates		209
Sal Alembroth		147
Salicifrice		28
Salicin	5 to 30 gr.	27
Salicylate of Camphor	1 to 5 gr.	71
„ Iron	2 to 10 gr. or more.	26
„ Sodium	10 to 30 gr.	26
Salicylated Camphor Wool, 8 per cent.		73
Salicylic Acid	5 to 30 gr. or more	24
„ „ Ointment, 1 in 30		28
„ „ Cream, 1 in 6½		27
„ „ Plaster		27

NAME.	DOSE.	PAGE
Salicylic Silk		28
,, Wool (Thiersch), 1 in 25		28
Sandal Wood Oil	10 to 30 m.	194
Sanguinaria		237
Sanguinarin	¼ to 1 gr.	237
Sanguis Bovinus Exsiccatus		123
Sanitas		149, 217
Santonica	10 to 60 gr.	237
Santoninum	2 to 6 gr.	237
Sapo Kalinus		239
,, Thymol		257
,, Viridis		239
Sassy Bark		115
Scammoniæ Resina	3 to 8 gr.	
Scammonium	5 to 10 gr.	
Scilla	1 to 3 gr.	
Scillain		240
Scillipicrin		239
Scillitoxin		240
Sclerotic Acid	½ to ¾ gr.	114
Sclerotinic Acid	½ to ¾ gr.	114
Scotch Pine, or Fir		216
Scutellarin	1 to 5 gr.	240
Secale Cornutum	10 to 30 gr.	112
Secalin		260
Seidlitz Powders		245
Selenite		167
Senna	10 to 30 gr.	14
Silicate of Potassium Solution		244
,, of Sodium Solution		243
Silk, Salicylic		28
Silver, Nitrate of	1-6 to 1-3 gr.	50
,, *Oxide of*	½ to 2 gr.	
Smelling Salts, Carbolized		10
Snakeroot, Black		84
Soap, Green		239
Soap of Thymol		257
Socaloin	1 to 4 gr.	43
Soda Mint Tablets		248
,, *Tartarata*	2 to 4 dr.	
Sodæ Arsenias	1-16 to 1-8 gr.	223
,, *Bicarbonas*	10 to 60 gr.	
,, *Carbonas*	5 to 30 gr.	
,, *Carbonas Exsiccata*	3 to 10 gr.	
,, *Citro-Tartras Effervescens*	1 to 4 dr.	
,, *Hypophosphis*	1 to 6 gr.	208

NAME.	DOSE.	PAGE
Sodæ Nitras	5 to 30 gr.	
,, *Phosphas*	20 gr. to 1 oz.	243
,, *Sulphas*	2 to 8 dr.	244
,, *Valerianas*	1 to 5 gr.	
Sodii Benzoas	10 to 30 gr.	2
,, Bromidum	10 to 30 gr.	241
,, *Chloridum*	10 to 240 gr.	
,, Ethylas		241
,, Chloras	10 to 30 gr.	241
,, Hippuras	5 to 30 gr.	3
,, Hypobromitis Solutio		242
,, Hypophosphis	1 to 6 gr.	208
,, Hyposulphis	10 to 60 gr.	82
,, Iodidum	8 to 20 gr.	242
,, Nitris	2 to 5 gr. increased	242
,, Permanganas		234
,, Phosphas Effervescens	1 to 3 dr.	243
,, ,, Exsiccata	10 gr. to 4 dr.	243
,, Salicylas	10 to 30 gr.	26
,, Santonas	5 to 10 gr.	239
,, Sulphas Effervescens	60 gr. or more.	244
,, Sulphas Exsiccata	½ to 4 dr.	244
,, Sulphindigotas		252
,, Sulphis	5 to 20 gr.	32
,, Sulphocarbolas	10 to 15 gr.	13
Sodio-Magnesii Sulphas Effervescens	60 gr. or more	245
Sodium Salts		240
Soluble Glass		243
,, for Bandages		244
Solutio Phenolphthaleïni		254
,, Zinci Chloridi Antiseptica		263
Solution of Coal Tar		14
Sonstadt's Solution for Testing Gems		255
Spiritus Ætheris	30 to 90 m.	38
,, ,, Compositus, P.L.	30 to 90 m.	38
,, ,, *Nitrosi*	½ to 2 dr.	
,, *Ammoniæ Aromaticus*	½ to 2 dr.	
,, ,, *Fœtidus*	½ to 2 dr.	
,, *Armoraciæ Compositus*	1 to 2 dr.	
,, *Cajuputi*	½ to 1 dr.	
,, *Camphoræ*	10 to 30 m.	
,, Camphoræ Fortior	2 to 5 m.	70
,, *Chloroformi*	5 to 60 m.	84
,, *Juniperi*	30 to 60 m.	
,, *Lavandulæ*	30 to 60 m.	
Menthæ Piperitæ	30 to 60 m.	

NAME.	DOSE.	PAGE
Spiritus Myristicæ	30 to 60 m.	
„ Thymol	3 to 15 m.	257
Staining Preparations		267
Starch and Iodine Paste		161
„ Iodized	½ to 4 dr.	159
Stillingia		245
Stillingin	1 to 3 gr.	245
Stramonium		106, 223
Strychnia	1-30 to 1-12 gr.	246
Strychniæ Acetas	1-24 to 1-10 gr.	247
„ Nitras	1-24 to 1-10 gr.	247
„ Sulphas	1-24 to 1-10 gr.	247
„ „ Acida	1-20 to 1-10 gr.	247
Styles of Boracic Acid		4
Styptic Colloid		97
Sublimate Wood Wool, ½ per cent.		266
Succus Ari	1 dr.	259
„ *Belladonnæ*	2 to 15 m.	59
„ *Conii*	½ to 1 dr.	
„ *Hyoscyami*	½ to 1 dr.	
„ *Scoparii*	1 to 2 dr.	
„ *Taraxaci*	1 to 2 dr.	
Sugar Coating of Pills		216
Sugar in Urine, Tests for		252
Sulphide of Calcium	1-10 to 1 gr.	66
Sulphindigotate of Sodium		252
Sulphite of Sodium	5 to 20 gr.	32
Sulphocarbolates		13
Sulphur Præcipitatum	20 to 60 gr.	248
„ *Sublimatum*	20 to 60 gr.	248
Sulphurous Acid	30 to 120 m.	31
„ Anhydride		31
Suppositories with Cacao Butter, 15 gr. in each		
„ with Gelatine Basis, 20 gr. in each		
Suppositoria Acidi Boracici, 3 gr.		4
„ „ Carbolici, 1 gr.		10
„ „ „ *cum Sapone*, 1 gr.		10
„ „ *Tannici*, 3 gr.		
„ „ „ *cum Sapone*, 3 gr.		
„ Atropiæ, 1-20 gr.		
„ Belladonnæ Ext., 1 gr. and 2 gr.		60
„ „ Alc. Ext., ½ gr.		
„ Bismuthi Oxychloridi, 10 gr.		61
„ Chloral, 5 gr.		79
„ Gallæ, 5 gr.		
„ Gallæ, 5 gr. Opii, 1 gr.		

NAME.	DOSE.	PAGE
Suppositoria Hamamelin, 1 gr.		146
,, *Hydrargyri Unguenti*, 5 gr.		
,, Iodoformi, 1 gr., 3 gr., and 5 gr.		156
,, *Morphiæ Hydrochloratis*, ½ gr., ,, also ¼ gr., and 1 gr.		179
,, *Morphiæ cum Sapone*, ½ gr.		179
,, Opii, 1 gr.		
,, { *Plumbi Acetatis*, 3 gr. *Opii*, 1 gr. }		
,, Santonini	3 gr., 5 gr., and 6 gr.	238
,, Zinci Oleatis	5 gr.	
,, ,, Oxidi	5 gr.	
Surgical Dressings		265
Sweet Vernal Grass		46
Syrupus,	1 or 2 dr.	
,, *Aurantii*	1 dr.	
,, *Aurantii Floris*	1 dr.	
,, Calcii et Ferri Lactophosphatis	1 or 2 dr.	21
,, Calcii Lactophosphatis	1 or 2 dr.	21
,, ,, Hypophosphitis	1 or 2 dr.	208
,, *Chloral*	½ to 2 dr.	79
,, Codeiæ	1 dr.	95
,, Croton-Chloral	1 dr.	103
,, Eucalypti Gummi	30 to 60 m.	120
,, Ferri Bromidi	1 dr.	123
,, Ferri Bromidi cum Quiniâ	1 dr.	124
,, Ferri Bromidi cum Quiniâ et Strychniâ,	1 dr.	124
,, Ferri Bromidi cum Strychniâ	1 dr.	124
,, Ferri Dialysati	1 dr.	127
,, Ferri et Manganesii Phosphas	1 dr.	128
,, Ferri et Quiniæ Citratis	1 dr.	229
,, Ferri Hypophosphitis	1 dr.	207
,, *Ferri Iodidi*	1 dr.	
,, *Ferri Phosphatis*	1 dr.	128
,, Ferri Phosphatis Compositus	1 dr.	128
,, Ferri, Quiniæ et Strychniæ Phosph.	1 dr.	129
,, *Hemidesmi*	1 dr.	
,, Hypophos. Co.	1 dr.	208
,, *Limonis*	1 dr.	
,, *Mori*	1 dr.	
,, *Papaveris*	1 dr.	
,, *Pruni Virginianæ*	1 dr.	225
,, *Rhamni*	1 dr.	
,, *Rhœados*	1 dr.	
,, *Rhei*	1 to 4 dr.	
,, *Rosæ Gallicæ*	1 dr.	
,, *Scillæ*	30 to 60 m.	

NAME.	DOSE.	PAGE
Syrupus Sennæ	1 to 4 dr.	
,, *Tolutanus*	1 dr.	
,, *Zingiberis*	1 dr.	
Tablets Compressed, list of		249
Talc		167
Tamarind	2 dr.	
Tannate of Cannabin	2 to 10 gr. increased	72
Tar	2 to 10 gr.	218
Tenax		218
Terchloride of Formyl	1 to 10 m.	79
Terebena Pura	5 to 30 m.	249
Terebinthina Chia	5 to 10 gr.	250
Terebinthinæ Oleum	10 to 240 m.	
Test Papers for Urine		252, 254
Test Solutions		252
Tetrachloride of Carbon		75
Theine	½ to 5 gr.	255
Theobromine	1 to 5 gr.	255
Thuja		256
Thymol	½ to 20 gr.	256
,, Gauze		257
,, Soap		257
,, Solution (Volckmann's)		256
Tinctura Aconiti	5 to 15 m, or 1 m. often	35
,, Aconiti (Fleming)	1 to 5 m.	35
,, Aconiti (Turnbull)	1 to 5 m.	35
,, Actææ	15 to 60 m.	84
,, Agarici	20 to 60 m.	42
,, *Aloes*	1 to 2 dr.	
,, Anacardii	2 to 10 m.	46
,, Anthemidis	3 to 10 m.	46
,, Anthoxanthi	2 to 6 m.	47
,, Apis Mellificæ	1 m. hourly	
,, Apocyni Cannabini	5 to 60 m.	48
,, *Arnicæ*	1 to 2 dr.	
,, *Assafœtidæ*	½ to 1 dr.	
,, *Aurantii*	1 to 2 dr.	
,, *Aurantii Recentis*	1 to 2 dr.	
,, *Belladonnæ*	5 to 20 m.	60
,, *Benzoini Composita*	30 to 60 m.	
,, Bryoniæ	1 to 10 m.	62
,, *Buchu*	1 to 2 dr.	
,, Calendulæ		68
,, *Calumbæ*	½ to 2 dr.	
,, *Camphoræ Composita*	15 to 60 m.	
,, *Cannabis Indicæ*	5 to 20 m.	

NAME.	DOSE.	PAGE
Tincturæ Cantharidis	5 to 20 m.	73
,, *Capsici*	3 to 20 m.	75
,, Capsici Concentrata, 1 in 3		75
,, *Cardamomi Composita*	½ to 2 dr.	
,, *Cascarillæ*	½ to 1 dr.	
,, *Castorei*	½ to 1 dr.	
,, *Catechu*	½ to 2 dr.	
,, *Chiratæ*	½ to 2 dr.	
,, *Chloroformi Composita*	5 to 60 m.	84
,, *Cinchonæ Composita*	½ to 2 dr.	90
,, *Cinchonæ Flavæ*	½ to 2 dr.	90
,, *Cinnamomi*	½ to 2 dr.	
,, *Cocci*	as colouring	
,, Colchici Floris Recentis	10 to 30 m.	
,, *Colchici Seminum*	10 to 30 m.	
,, Colocynthidis, P.G.	3 to 15 m.	
,, *Conii*	20 to 60 m.	
,, Convallariæ	5 to 30 m.	98
,, Coto	10 to 20 m.	99
,, *Croci*	as colouring	
,, *Cubebæ*	½ to 2 dr.	
,, *Digitalis*	10 to 30 m.	
,, Elaterii Composita	10 to 30 m.	109
,, *Ergotæ*	15 to 60 m.	113
,, Erythrophlœi	5 to 10 m.	115
,, Eucalypti Foliorum	15 to 120 m.	118
,, Eucalypti Gummi	20 to 40 m.	121
,, Euonymi	10 to 40 m.	121
,, *Ferri Acetatis*	5 to 30 m.	
,, *Ferri Perchloridi*	10 to 30 m.	
,, *Gallæ*	½ to 2 dr.	
,, Gelsemii	5 to 30 m.	137
,, *Gentianæ Composita*	½ to 2 dr.	
,, Gossypii Radicis	1 dr.	144
,, *Guaiaci Ammoniata*	30 to 60 m.	
,, Guaranæ	30 to 60 m.	145
,, Hamamelidis	2 to 5 m.	146
,, Hydrastis	30 to 60 m.	149
,, *Hyoscyami*	30 to 60 m.	
,, *Iodi*	5 to 20 m.	158
,, di Decolorata		159
,, Jaborandi, 1 in 2	10 to 60 m.	163
,, *Jalapæ*	30 to 120 m.	
,, *Kino*	30 to 120 m.	
,, *Krameriæ*	30 to 120 m.	
,, *Laricis*	20 to 30 m.	

NAME.	DOSE.	PAGE
Tinctura Lavandulæ Composita	30 to 120 m.	
„ *Limonis*	30 to 120 m.	
„ *Lobeliæ*	10 to 30 m.	
„ *Lobeliæ Ætherea*	10 to 30 m.	
„ *Lupuli*	30 to 60 m.	
„ *Myrrhæ*	30 to 60 m.	
„ *Nucis Vomicæ*	5 to 20 m.	
„ *Opii*	10 to 30 m.	
„ *Opii Ammoniata*	30 to 60 m.	
„ Phosphori Composita	3 to 13 m.	205
„ Podophyllin (Dobell)	1 dr.	221
„ Podophyllin (R.)	2 to 4 m.	221
„ Podophyllin Ammoniata	2 to 20 m.	222
„ Pruni Virginianæ	20 to 60 m.	
„ Pulsatillæ	1 to 5 m. increased	226
„ *Pyrethri*	... ...	
„ *Quassiæ*	30 to 120 m.	
„ Quebracho	30 to 60 m.	227
„ *Quiniæ*	30 to 120 m.	232
„ „ *Ammoniata*	30 to 120 m.	232
„ *Rhei*	30 to 120 m.	
„ Rhois	1 to 5 m.	236
„ Rumicis	1 to 10 m.	237
„ *Sabinæ*	20 to 60 m.	
„ *Scillæ*	10 to 30 m.	
„ *Senegæ*	30 to 120 m.	
„ *Sennæ*	1 to 4 dr.	
„ *Serpentariæ*	30 to 120 m.	
„ *Stramonii*	10 to 30 m.	
„ *Sumbul*	10 to 30 m.	
„ Thujæ	2 to 6 m.	256
„ *Tolutana*	20 to 40 m.	
„ *Valerianæ*	30 to 120 m.	
„ „ *Ammoniata*	½ to 1 dr.	
„ *Veratri Viridis*	5 to 20 m.	
„ *Zingiberis*	15 to 60 m.	
„ *Zingiberis Fortior*	5 to 20 m.	
Tonga	1 to 2 dr.	258
Tonka Bean	...	100
Tonquin Bean	...	100
Tragacantha	2 to 10 gr.	259
Trimethylamina	20 to 60 m. of solution	260
Trimethylaminæ Hydrochloras	2 to 3 gr.	260
Trochisci (Medicated Lozenges), F. with Fruit Paste, S. with plain sugar:—		
Acidi Benzoici, F., ½ gr. (Stimulant Voice Lozenge), T H.	1 every 4 hours	

Name.	Dose.	Page
Trochisci (Medicated Lozenges) F. with Fruit Paste, S. with Plain Sugar:—		
Acidi Carbolici, S., 1 gr., T.H.	... 4 or 5 daily	11
„ **Citrici (Acid Lemon Drops)**	... *ad libitum*	
„ ***Tannici*, S., ½ gr.... ...**	... 1 frequently	
„ **Tannici, F. 1½ gr., T.H.**	1 every 3 or 4 hours	
„ **Tannici et Capsici, F. ...**	... 1 frequently	
Aconiti, F., Tinct. ½ m., T.H.	1 every ½ hour	
Althææ (Pastilles de Guimauve), T.H.	*ad libitum*	
Aluminis, S., 1 gr.	1 or 2 after meals	
Ammonii Chloridi, F. 2 gr., T.H.	1 every 3 hours	43
Apomorphiæ, 1-50 gr.	every 2 hours	49
***Bismuthi*, S., 2 gr. ... ...**	1 or 2 after meals	
Boracis, F., 3 gr., T.H....	1 every 3 or 4 hours.	
„ **et Potassæ Chloratis, F.**	„ „	
Camphoræ, S.	... 1 frequently	70
Capsici, S. (and as Voice Jujubes) ...	„	
Carbonis S. (Willow Charcoal)	1 or 2 after meals	
Carnis (Meat Lozenges) ...	... *ad libitum*	122
Catechu, F., 2 gr., T.H. ...	1 every 3 hours	
***Catechu*, S., 1 gr. ... ...**	„	
Codeiæ, 1-8 gr., S....	... 4 or 5 daily	96
Cubebæ, F., 3 gr., T.H....	1 every 3 or 4 hours	
Eucalypti Gummi, F., 1 gr. ...	1 after meals	121
„ **Compositi, F., 1 gr.**	... 4 or 5 daily	121
***Ferri Redacti*, S., 1 gr. ...**	... 1 or 2 after meals	
Gelatinæ	... *ad libitum*	
Glycerini (Jujubes or Pastils)	... *ad libitum*	
Glycyrrhizæ (Pontefract Cakes or Pipes) ...	...	143
Guaiaci, F., 2 gr., T.H.... ...	... 3 to 6 daily	
Guaiaci, S., 2 gr.	... ...	
Hydrargyri Subchloridi, S., 1 gr. and 2 gr....	...	
***Ipecacuanhæ*, S., ¼ gr.... ...**	... 4 or 5 daily	
Ipecacuanhæ, S., 1 gr.	... 2 or 3 daily	
Kino, F., 2 gr., T.H. ...	1 every 3 or 4 hours	
Krameriæ, F., Ext. 3 gr., T.H.	1 „ „ „	
Lactucæ, F., Ext., 1 gr., T.H.	1 „ 1 or 2 „	
Lavandulæ, S.	... *ad libitum*	
Menthæ Piperitæ	... „ „	
„ „ **Fortior ...**	... „ „	
***Morphiæ*, S., 1-36 gr. ... ...**	... 4 or 5 daily	179
Morphiæ, F., 1-36 gr.	... „ „ „	
***Morphiæ*, 1-36 gr., *et Ipecacuanhæ*, 1-12 gr., S. (and F., unofficial)**	... 4 or 5 daily	180
Morphiæ 1-40 gr., & Emetin, 1-80 gr., S.	„ „ „	
Moschi, S.	... *ad libitum*	
Nitroglycerini, 1-200 gr., 1-100 gr., 1-50 gr., 1-25 gr.	...	186

NAME.	DOSE.	PAGE
Trochisci (Medicated Lozenges) F. with Fruit Paste, S. with Plain Sugar :—		
... *Opii*, S., Ext. 1-10 gr. (and Liquorice),	2 to 6 daily	
Paregoric, S.	2 ,, 6 ,,	
Potassæ Chloratis, S., 5 gr.	3 ,, 6 ,,	
,, Chloratis, S. (Codex), 3 gr. ...	3 ,, 6 ,,	
,, Chloratis, F., 3 gr., T.H. ...	3 ,, 6 ,,	
,, Citratis, F., 3 gr., T.H. ...	3 ,, 6 ,,	
,, Nitratis, S., 3 gr.	3 ,, 6 ,,	
,, Tartratis Acidæ, F., 3 gr., T.H.	3 ,, 6 ,,	
Pyrethri, F., 1 gr., T.H.	3 ,, 6 ,,	
Rhamni Frangulæ (Aperient Fruit Lozenges)	1 to 2	230
Ribis Nigri (Fruit Lozenges)... ...	*ad libitum*	
Rosæ, S.	,, ,,	
Santonini, S., 1 gr.	1 or 2 at bedtime	236
Sedative, F., Ext. Opii 1-10 gr., T.H.	3 to 6 daily	
Sodæ Bicarbonatis, S., 5 gr. ...	1 or 2 after meals	
Sodii et Zingiberis, S.	1 or 2 ,, ,,	
Sodii Chloratis, F. and S., 3 gr.,	3 to 6 daily ...	241
Tolutani, S.	*ad libitum*	
Zingiberis, S.	,, ,,	
Tropæoline OO		255
Tropic Acid		52
Tropin		52
Trypsin		195
Turnbull's Tincture of Aconite	1 to 5 m.	35
Turner's Cerate		168
Turpentine, Oil of	10 m. to 4 dr.	
,, French Oil	30 m. every ½ hour	201
Unguentum Acidi Boracici, Nos. 1, 2 and 3, 1 in 6 ...		4
,, ,, Carbolici, 1 in 20..		11
,, ,, Chrysophanici, 20 gr. in 1 oz.... ...		17
,, ,, Pyrogallici, 60 gr. to 1 oz.		29
,, ,, Salicylici, 1 to 30...		28
,, *Aconitiæ*, 1 in 60		34
,, *Antimonii Tartratis*, 1 in 5		
,, *Atropiæ*, 8 gr. in 1 oz.		54
,, ,, cum Vaselino, 1 in 60 ...		54
,, *Belladonnæ*, 80 gr. in 1 oz.		60
,, Bismuthi Oxychloridi, 30 gr. in 1 oz.		61
,, *Cadmii Iodidi*, 1 in 8		
,, *Cantharidis*, 1 in 8		
,, *Cetacei*		
,, Chrysarobini, U.S., 1 in 10		17
,, *Creasoti*, 60 m. in 1 oz. ...		102
,, Creasoti Forte, 2 parts in 3		1

Name.	Dose.	Page
Unguentum Cupri Oleatis		189
,, Diachyli		191, 192
,, *Elemi*, 1 in 5		
,, Eucalypti, 1 (oil) in 5		118
,, *Gallæ*, 1 in 6½		
,, ,, *cum Opio* 1 (opium) in 15		
,, Gynocardiæ, 1 in 4		194
,, Hamamelidis, 1 (tincture) to 10		146
,, *Hydrargyri*, 1 in about 2		
,, ,, Oxidi Flavi, 1 in 60 Vaseline		
,, ,, *Ammoniati*, 1 in 8		
,, ,, *Compositum*		
,, ,, *Iodidi Rubri*, 16 gr. in 1 oz.		
,, ,, *Nitratis*		
,, ,, *Oxidi Rubri*, 1 in 8		
,, ,, *Subchloridi*, 80 gr. in 1 oz.		
,, *Iodi*, 16 gr. in 1 oz.		158
,, Iodoformi, U.S., 1 in 10		156
,, ,, et Eucalypti, 1 in 50		156
,, ,, Rosatum, 5 gr. in 1 oz.		156
,, Kaolin		167
,, Olei Cadini, 1 in 2		220
,, Paraffinis		132
,, Petrolei		136
,, *Picis Liquidæ*, 5 to 7		219
,, Plumbi, U.C.H.		192
,, *Plumbi Acetatis*, 12 gr. to 1 oz.		
,, ,, *Carbonatis*, 1 in 8		
,, ,, *Iodidi*, 1 in 8		
,, ,, Oleati		191
,, ,, *Subacetatis Compositum*		
,, ,, ,, cum Petroleo		140
,, *Potassæ Sulphuratæ*, 30 gr. in 1 oz.		
,, *Potassii Iodidi*, 1 in 8		
,, *Resinæ*		
,, *Sabinæ*		
,, *Simplex*		
,, *Sulphuris*, 1 in 5		
,, ,, cum Hydrargyro		248
,, ,, Hypochloritis		249
,, ,, *Iodidi*, 30 gr. in 1 oz.		249
,, *Terebinthinæ*		
,, Thymol		257
,, Vaselini Plumbicum		192
,, *Veratriæ*, 8 gr. in 1 oz.		261
,, *Zinci*, 80 gr. in 1 oz.		

NAME.	DOSE.	PAGE
Unguentum Zinci Oleati		192
„ „ „ **Durum**		193
Urari	1-20 to ½ gr.	104
Urine, Test Papers		252, 254
Uterine Points		264
Vapor Acidi Carbolici		11
„ **Aldehydi**		42
„ **Creasoti**		102
„ **Iodi Ætherealis**		160
„ **Pini Sylvestris**		217
„ **Terebenæ**		250
„ **Thymol**		257
Varnishing Pills		215
Vaseline		132
Vaselinum Album		133
Veratria		261
Veratriæ Oleatum		261
Verbascum Thapsus		262
Vienna Paste		242
Vin de Quinquina	1 to 4 dr.	90
Vinum Aloes	1 to 2 dr.	
„ *Antimoniale*	5 to 60 m.	
„ *Colchici*	10 to 30 m.	
„ *Ferri*	1 to 4 dr.	
„ *Ferri Citratis*	1 to 4 dr.	
„ *Ipecacuanhæ*	5 to 40 m. expectorant 3 to 6 dr. emetic	
„ *Opii*	10 to 40 m.	
„ **Pepsinæ**	1 to 2 dr.	201
„ *Quiniæ*	2 to 8 dr.	232
„ *Rhei*	1 to 2 dr.	
Vlemingkx' Solution		68
Volckmann's Solution of Thymol		256
Volumetric Solution of Iodine		157
Warburg's Fever Tincture	1 to 4 dr.	232
Wheat Phosphates, Saccharated		209
White Agaric	10 to 30 gr.	41
White Quebracho Bark		226
Wine of Cinchona	1 to 4 dr.	90
Wine of Coca	½ to 2 oz.	93
Winter Bloom		146
Witch Hazel		146
Wool, Absorbent		144
Wools, Medicated		144
Wourara	1-20 to ½ gr.	104
Wrack, Bladder		13
Zanaloin	1 to 4 gr.	48

NAME.	DOSE.	PAGE
Zinc Cream		136
Zinci Acetas	1 to 2 gr.	
Zinci Bromidum	3 to 10 gr.	262
,, *Chloridum*	½ to 1 gr.	263
,, Citras	3 to 12 gr.	264
,, Lactas	3 to 30 gr.	264
,, Oleas		193
,, Oleatum		193
,, *Oxidum*	2 to 10 gr.	167
,, Permanganas		234
,, Phosphidum	1-20 to 1-3 gr.	205
,, *Sulphas*	1 to 3 gr. tonic 10 to 30 gr. emetic	
,, ,, Uterine Points		264
,, Sulphatis Lotio Rubra		264
,, Sulphocarbolas		14
,, *Valerianas*	1 to 3 gr.	264
Zingiber	5 to 15 gr.	

THERAPEUTIC INDEX

OF

DISEASES AND SYMPTOMS.

N.B.—The Remedies are arranged in Alphabetical order.

Acne.—*Internal*—Calcii Sulphid., Hypophosphites, Iron Salts, Potassii Bromid., Quiniæ et Ferri Citras, Sodii Bromid., Sulphur.—— *Local* — Acid. Chrysophanic., Calaminæ Lotio, Belladonna, Hydrarg. Perchlorid. Lotio, Sulphur. Iodid. Ung., Sulphur. Hypochlorid. Ung., Thymol Ung.

Ague.—Acid. Salicylic. and Salicin, Apiol, Arsenic, Chinolinum, Cinchonia, Cinchonidiæ Sulphas, Eucalyptus Globulus, Hydrastis, Narcotina, Pilocarpine, Quinetum, Quiniæ Sulph., Quiniæ Hydrobrom., Quinidiæ Sulph., Sodii Hyposulph., Warburg's Tincture.

Albuminuria.—Acid. Gallic., Fuchsine, Jaborandi and Pilocarpine, Ozonic Ether.

Alcoholism—Arsenic, Capsicum, Cinchona rubra, Hydrastis, Lupulin, Morphia, Nux Vomica, Phosphorus, Picrotoxin, Quinine preps., Strychnia.

Alopecia.—*Internal*— Pilocarpine, Strychnia.——*Local*— Ammon. Liquor, Cantharides preps., Iodum, Nuc. Vomic. Tinct., Petroleum Spirit, Pilocarpine Nitrate Solution.

Amenorrhœa.—Actæa and Cimicifugin, Aloes, Apiol, Caulophyllin, Ergota, Gossypii Rad. Cortex, Iron Salts, Manganesii Oxidum, Phosphas and Sulphas, Potass. Permang., Pulsatilla, Thuja.

Anæmia.—Arsenic, Calcis Phosph., Calcis Hypophosph., Ferri Bromid., Ferri Chloroxid. Liquor, Ferrum Dialysat., Ferri Hypophosph., Ferri Perchlorid., Ferri Phosph., Ferri Sulph., Pil. Ferri Carb. (Blaud), and Pil. Ferri Sulph., Phosphorus, Quinine preps., Sodii Hypophosph.

Anæsthetics by inhalation.—A.C.E., Æther, Æthyl Bromid., Æthyl Iodid., Carbon. Tetrachlor., Chloramyl, Chloroform, Ethideni Dichlorid., Iso-Butyl Chlorid., Methyleni Bichlorid., Nitrous Oxide Gas.

Aneurism—Aconite, Amyl Nitris (?), Digitalis, Ergotina, Nitroglycerine (?), Potassii Iodid.

Angina Pectoris.—Æther, Æthyl Iodid., Amyl Nitris, Arsenic, Morphiæ inj. hypod., Nitroglycerini Liquor and Tablets, Phosphorus, Sodii Nitris.

Anthelmintics.—See Parasites, Intestinal.

Aphthæ.—*Internal*—Acid. Nit. Dil., Potass. Chloras, Sodii

Chloras.——*Local*—Acid. Boracic., Acid. Sulphuros., Alumen, Bismuth, Borax, and Glyc. of, Potass. Chloras, Potass. Permang., Sodii Chloras., Sodæ Chlorinat. Liq.

Ascarides.—See **Parasites, Intestinal.**

Ascites.—See **Dropsy.**

Asthma.—*Internal*—Æthyl Iodid., Amyl Nitris, Antimony, Arsenic, Belladonna, Caffeine, Cannabis, Cannabin Tannas, Chloral Hydras, Chloroform, Colchicum and Colchicin, Coca, Daturine, Delphinia, Euphorbia pilulifera, Grindelia, Jaborandi, Lobeliæ Tinct. and Tinct. Ætherea, Nitroglycerine, Pilocarpine, Quebracho, Stramonium.——*Local*—Acid. Sulphuros. Vapor, Arsenical Cigarettes, Chloroform Vapor, Eucalyptus leaves smoked, Potass. Nit. fumus, Stramonii fumus, Tobacco fumes, Bliss', Green Mountain, and Himrod's Cures by fumes.

Bed Sores. — *Local* — Acid. Tannic. Glycerin., Alcohol, Argent. Nit. in Nitrous Ether solution, Brandy, Glycerine, Iodoform. Gossyp. and Ung., Peruv. Bals., Tannin Iodoform and Starch Powder.

Bile, Deficiency of. — Hydrarg. cum Cretâ, Sodii Phosph. Efferves., Sodii Sulph. Efferves., Taraxacum.

Biliousness.—Euonymin, Hydrastis and Hydrastin, Iridin, Juglandin, Leptandrin, Podophyllin, Sanguinarin, Seidlitz Powders, Sodii Phosph. Efferves., Sodii Sulph. Efferves., Sodio-Magnes. Sulph. Efferves., Stillingia.

Bites and Stings.—*Local*—Alcohol, Ammon. Liquor, Chloroform, Onion Juice, Potass. Permang. (for Serpent's venom), Sodæ Bicarb., Thymol and Starch powder, Thymol Ung.

Bladder, Catarrh of.—See **Catarrh, Vesical.**

Boils and Carbuncles.—*Internal*— Alkalies, Arsenic, Calcii Sulphid., Ferri Perchlorid., Hypophosphites, Sulphides, Sulphurous Waters, Yeast.——*Local*—Argent. Nit., Belladonnæ Glycerin. (as pigment and on poultices), Collodium, Fermenti Cataplasma, Opii Ext.

Brain, Softening of. — Hypophosphites, Iron Salts, Morrhuæ Ol., Phosphorus.

Breast, Inflammation of.—*Local* — Belladonnæ Ext. Glycerin. and Linim.

Breath, Fetid.—*Local*—Acid. Salicylic., Calcii Permang., Camphora, Creasoti Vapor, Myrrh with Borax Tincture, Sanitas (Toilet).

Bright's Disease.—Alkalies, Cannabis, Digitalis, Elaterium, Hydrastis, Jaborandi and Pilocarpine, Nitroglycerine, Potass. Iodid., Scoparius.

Bronchitis, Acute. — Aconite, Ammon. Acet. Liquor, Antimony, Ipecacuanha, Pulsatilla.

Bronchitis, Chronic.—*Internal*—Ammon. Carb., Ammon. Chlorid., Apomorph. Hydrochl., Arsenic, Benzoates and Benzoin. Tinct., Eucalyptus Globulus, Grindelia, Morphia preps., Morrhuæ Ol., Piscidia, Prunus Virginiana, Pulsatilla, Scilla, Senega, Tar, Tolu. Bals.——*Local*—Acid. Carbolic. Vapor, Acid. Sulphuros. Vapor, Creasoti Vapor, Croton Ol. cum Collod., Croton Linim., Iodi Linim., Iodi Vapor.

Bruises.—*Local*—Arnicæ Tinct. (well diluted), Calendula, Hamamelis, Hazeline.

Burns and Scalds—*Local*—Acid. Boracic Ung., Calamin. Cerat., Chartazinc, Iodoform., Lini. Ol. cum Aquâ Calcis, Thymol. Ung., Vaseline, Zinci Oleat. Ung., Zinci Ung.

Bubo.—*Local*—Chlori Aqua, Hydrarg. Oleat., and cum Morphiâ, Hydrarg. Ung., Hydrogen. Peroxid.

Calculi, Urinary.—Alkaline Carbonates, Ammon. Benz. and Phosph., Calcis Aqua, Lithia preps., Mineral Acids (for Phosphatic), Potass. Citras, Sodii Benz. and Hippuras.

Cancer. — *Internal* — Arsenic preps., Calcii Sulphid., Chloral Hydras and Opium preps. (as sedatives), Terebinth. Chia.—*Local*—Acid. Carbolic. (caustic), Acid. Carbolic. Glycerin., Acid. Chromic., Acid. Salicylic. cum Oleo, Bromum cum Acid. Oleic., Hydrarg. Nit. Acid. Liquor, Iodoform., London Paste, Morphia, Morphiæ Oleat., Quiniæ Salicylas, Tannin and Opium, Vienna Paste, Zinci Chlorid. and Paste.

Carbuncles.—See **Boils.**

Cardialgia.—See **Gastralgia.**

Caries. — Calcii Chlorid., Calcii Hypophosph., Calcis Phosph., Saccharated Wheat Phosphates.

Catarrh, Bronchial.—Aconite, Actæa, Aldehyd. Vapor, Ammon. Chlorid., Antim. Tart., Ferrier's Snuff, Prunus Virginiana, Pulsatilla, Sinapis Emplast., Spt. Æther. Nitros.

Catarrh, Gastro-intestinal.—Bismuth preps., Caffeine, Eucalyptus Globulus, Hydrastis, Hydrocyanic Acid, Salines.

Catarrh, Vesical and **Cystitis.**—Acid. Lactic, Alkalies, Benzoates, Buchu, Eucalyptus Globulus, Gokhru, Hydrastis, Juniper, Pareira, Triticum repens.

Catarrh, Nasal.—Acid. Carbolic. Buginarium, Bismuth. Co. Pulv., Carbolised Smelling Salts, Iodoformi Buginarium and Ung. Rosatum.

Catarrh, Uterine. — *Local* — Acid. Carbolic. Glycerin., Boracis Glycerin., Camphorated Carbolic Acid, Iodoform. Gossyp. and Pessus, Plumbi Subacet. Glycerin., Opii et Amyli Enema, Zinci Sulph. Uterine Pencils, and with Alum.

Chancres, Soft.—*Local*—Hydrarg. Flav. Lotio, Hydrarg. Nig. Lotio, Hydrarg. Subchlor., Iodoform. and Ung., Plumbi Acet. Lotio, Resorcin.

Chapped Skin.—*Local*—Acid. Boracic. Ung., Camphor Ball, Ceratum Petrolei, Collodium, Glycerin. cum Aquâ Rosæ, Vaseline.

Chilblains.—*Local*—Acid. Boracic. Ung., Acid. Carbolic. Ung., Aconit. Linim., Belladonnæ Linim. and Linim. Co., Cajeput Ol., Capsici Linim., Eucalypti Ol. Ung., Iodi Tinct. Decolor., Iodi Ung., Iodoform Wool and Ung., Oleanodyne, Plumbi Subacet. Glycerin., Plumbi. Subacet. cum Petrol. Ung.

Chloasma.—See **Tinea Versicolor.**

Chlorosis.—Arsenic, Ferri Amara Mist., Ferri Aper. Mist., Ferri Co. Mist., Ferri Carb. Pil. (Blaud), Ferri Dialysat. Liq., Ferri Perchlorid. Tinct., Ferri Sulph. Pil., Hypophosphites, Myrrh et Aloes Pil., Phosphorus.

Cholera.—Camphora, Chloromorphiæ Liq., Copper Salts, Coto and Cotoin, Hydrarg. cum Cretâ., Hydrarg. Subchlorid. cum Opio, Morphia, Opium, Paracotoin, Plumbi Acet., Plumbi cum Opio Pil.

Chordee.—Aconite, Belladonna, Bromides, Camphora, Cannabis, Canthar. Tinct. (one minim hourly), Chloral Hydras, Morphiæ inj. hypod., Opii Suppos.

Chorea.—Actæa, Arsenic, Calcii Chlorid., Chloral Hydras, Cimicifugin, Conium and Coniæ Hydrobrom., Curara, Ergota, Ferri Bromid., Ferri Phosph., Morrhuæ Ol., Phosphorus, Physostigma and Eserine, Strychnia, Valerianates, Zinci Bromid. and Oxid.

Colic.—Æther, Belladonna, Calcis Aqua (for infants), Cajeput Ol., Camphora, Chloroform, Chloromorphiæ Liq., Menth. Pip. Ol., Morphia preps., Opium preps.

Collapse and Fainting.—Æther inj. hypod., Æther. Spt., Alcohol, Ammon. Arom. Spt., Ammon. Vapor, Amyl Nitris., Digitalis Tinct. and Inj. Hypod. 20 m.

Conjunctivitis.—*Local*—Acid. Boracic., Alumen, Belladonna, Boroglyceride, Hydrarg. cum Morphiâ Oleat., Hydrarg. Oxid. Flav. Ung., Hydroquinone, Opii Vinum, Resorcin, Zinc. Sulph. Lotio.

Conjunctivitis, Diphtheritic.—*Local*—Quiniæ Sulph. Lotio., Hydroquinone, Resorcin.

Constipation.—Aloes and Aloin, Belladonna, Cascara, Coloc. Co. Pil., Coloc. Co. cum Hyoscy. Pil., Emblic Myrabolans, Hydrarg. Subchlorid., Iridin, Juglandin, Liquiritiæ Co.Pulv., Magnes. Sulph., NuxVomic., Podophyllin, Rhamnus Frangula, Rhei Co. Pil., Rhei Co. Pulv., Ricini Ol., Scammon. Co. Pil., Seidlitz Powders, Senna, Sennæ Confect., Sennæ Co. Mist., Sodii Phosph. Efferves., Sodii Sulphas Efferves., Sodio-Magnes. Sulph. Efferves., Sulphur, Sulphur. Confect.

Convulsions. — Amyl Nitris, Anæsthetics, Camphor. Monobrom., Chloral Suppos., Morphia preps., Podophyllin, Potass. Bromid., Sodii Bromid., Sodii Nitris.

Convulsions, Puerperal.—Anæsthetics, Chloral Hydras, Nitroglycerine, Pilocarpine.

Cornea, Inflammation, and Ulcers of.—*Local*—Atropia, Belladonna, Daturine, Duboisine, Eserine, Hydroquinone, Pilocarpine, Hydrarg. Oxid. Flav. Ung., Hydrarg. Subchlorid.

Corns.—See **Warts.**

Coryza.—See **Catarrh Nasal**, and **Hay Fever.**

Cough.—Acid. Hydrobromic., Belladonna, Benzol, Bryonia, Camphor. Co. Tinct., Chloral Hydras, Codeia, Conium, Gelsemium, Hyoscyamus, Morphiæ Linctus, Morphiæ Troch., Morphiæ et Ipecac. Troch., Narceia, Opium preps., Picis Liq. Pil., Piscidia, Prunus Virginiana.

Croup, True.—*Internal*—Acid. Lactic., Aconite and Aconiti Pastillus, Alumen, Ammon. Carb., Antimony, Bromides, Calcii Sulphid., Ipecacuanha, Zinci Sulph.——*Local*—Acid. Lactic. Nebula, Acid. Sulphuros. Nebula, Acid. Tannic. Nebula, Calcis Aquæ Nebula.

Croup, False.—See **Laryngismus Stridulus.**

Debility.—Alcohol, Arsenic preps., Calcis Phosph., Calumba, Cinchona preps., Gentiana, Hypophosphites, Iron Salts, Maltum, Morrhuæ Ol., Phosphorus, Quassia, Quinine preps., Strychnia.

Delirium Tremens, and see **Alcoholism.**—Alcohol, Ammon. Carb., Bromides, Camphora Monobromata, Capsicum, Chloral, Digitalis, Hyoscyamine, Opium preps., Phosphorus, Quinine preps., Strychnia, Veratrum viride.

Diabetes.—Acid. Lactic., Codeia, Convallaria, Glycerine, Hydrogen Peroxide, Jaborandi, Opium, Oxygen, Ozonic Ether, Sodii Salicylas, Thymol, Valerianates, Sodæ Arsenias.

Diarrhœa.—*Internal* — Acid. Carbolic., Acid. Gallic., Acid. Sulph. Dil. and Aromat., Agaricus albus and Agaricin, Anthemis, Bismuth preps., Calcis Aqua, Calcis Carb., Camphora, Catechu, Coto Tinct., Cotoin, Cretæ Arom. Pulv., and cum Opio, Cupri Sulph., Eucalyptus Gum., Ferri Pernit. Liq., Guarana, Hydrarg. cum Cretâ, Ipecac. Co. Pulv., Kino, Leptandrin, Myricin, Opium preps., Plumbi Acet., Podophyllin, Ricini Ol.——*Local*—Acid. Tannic. Suppos., and cum Opio, Amyli Enema, and cum Opio, Gallæ Suppos. and cum Opio, Turpentine Stupes.

Diphtheria.—*Internal*—Acid. Salicylic., Calcii Sulphid., Ferri Perchlorid., Pilocarpine, Sodii Hyposulphis., Sodii Chloras.——*Local*—Acid. Benzoic. Nebula, Acid. Carbolic. Glycerin. and Nebula, Acid. Lactic. Nebula, Acid. Sulphuros. Nebula, Argent. Nit., Calcis. Aquæ Nebula, Chinoline, Chlori Aqua, Eucalypti Ol. and Vapor, Hydroquinone, Papayotin, Pepsin. Glycerin. Acid., Resorcin, Sodii Benzoatis Nebula, Sodæ Chlorinat. Liquor.

Dipsomania.—See **Alcoholism.**

Dropsy, Cardiac. — Asparagin, Caffeine, Convallaria majalis, Delphinia, Digitalis, Digitalin, Elaterium, Erythrophlœum, Veratrum viride.

Dropsy, Hepatic.—Ammon. Benzoas, Ammon. Chlorid., Copaibæ Bals., Hydrarg. Pil., Hydrarg. Subchlorid., Sodæ Bicarb., Taraxacum.

Dropsy, Renal.—Apocynum Cannabinum, Buchu, Delphinia, Elaterium, Hydrarg. Pil., Jalapa, Juniperus, Pilocarpine, Potass. Acet., Potass. Tart. Acida, Potass. Iodid., Potass. Nit., Scilla, Sodii Iodid.

Dysentery.—Belæ Fructus, Eucalypti Gum., Guarana, Hæmatoxylum, Hamamelis, Hydrarg. Perchlorid., Ipecacuanha, Ipecac. Co. Pulv., Opium, Plumbi Acetas, Terebena pura, Terebinth. Ol., and Stupes of.

Dysmenorrhœa.—Actæa, Æther Spt. cum Opii. Tinct., Amyl Nitris, Anemonin, Apiol, Cannabis and Cannabin Tannas, Carbon. Tetrachlor. Vapor, Cimicifugin, Croton Chloral, Gossypii Rad. Cort., Potass. Bromid., Pulsatilla, Serpentaria, Valerian.

Dyspepsia.—Acid. Carbolic. Perle and Pil., Acid. Nit. Dil., Acid. Hydroch. Dil., Aloes and Aloin, Ammon. Carb., Argent. Nit. and Oxid., Arsenic, Belladonna, Bismuth. Carb. Oxychlorid. and Subnit., Capsicum, Cerii Oxalas, Creasote, Emblic Myrabolans, Gentiana, Gingerin, Hydrarg. cum Creta, Hydrastis, Hydrocyanic Acid, Leptandrin, Malti Ext., Menispermin, Nux Vomica, Pancreatin, Papayotin, Pepsin, Podophyllin, Quinine preps., Rhei Rad., Rumicin, Salicin, Sanguinarin, Sodæ Bicarb., Sodii Sulphocarb., Stillingia.

Dyspnœa.—Æther Spt., Æthyl Iodid., Alcohol, Amyl Nitris, Lobelia, Ozonic Ether, Quebracho and Aspidospermine.

Earache.—*Local.*—Atropiæ Liquor or Oleatum (diluted), Chloroformi Vapor, Morphiæ Oleatum (diluted), Opii Tinct. cum Oleo.

Eczema.—*Internal*—Arsenic preps. Iron Salts, Morrhuæ Ol., Phosphorus, Sulphides, Sulphur.——*Local*—Acid. Boracic. Lotio and Ung., Acid. Carbolic. Lotio and Ung., Acid. Chrysophanic. Ung. (weak), Acid. Salicylic. Ung., Bismuth Nit. Glycerin., Calaminæ Lotio, Calcis Aqua, Calcis Linim., Diachyli Ung., Huile de Cade, Kaolin Ung., Naphthol, Plumbi Stearas, Plumbi Subacet. Glycerin. and Ung. cum Petroleo, Tar, Thymol, Zinci Cremor, Zinci Oleat. Pulv. and Ung., Zinci Ung.

Epilepsy.—Ammon. Bromid., Amyl Nitris, Argent. Nit., Arsenic, Atropia, Belladonna, Borax, Bromal-Hydras, Brucia, Camphora Monobromata, Cannabis, Cupri Ammon-Sulph., Cypripedin, Iron Salts, Ozonic Ether, Picrotoxin, Potass Bromid., Sodii Bromid., Sodii Nitris, Strychnia, Valerianatæ, Zinci Bromid. Lactas and Sulphas.

Epistaxis.—*Internal*— Acid. Gallic., Aconite, Digitalis, Ergotin inj. hypod., Ferri Perchlorid., Ferri Pernit. Liq., Ferro-Alumen, Hamamelis, Terebinth. Ol.——*Local*—Acid. Tannic., Alumen, Hamamelis, Matico, Styptic Colloid.

Erysipelas.—*Internal*—Aconite, Belladonna, Digitalis, Ergot, Ferri Perchlorid., Veratrum viride.——*Local*—Acid. Sulphuros. Lotio, Amylum, Amyli Glycerin., Argent. Nit., Belladonnæ Glycerin., Calaminæ Lotio, Collodium, Creasotum et Amylum, Ergotine in Sol., Gossyp. Acid. Boracic., Iodi Pigment., Potass. Silicat. Sol.

Erythema.—*Local*—Amyli Glycerin., Anthemid. Infus., Diachyli Ung., Kaolin and Lotio or Ung., Papav. Infus., Plumbi Subacet. Lotio., Vaseline, Zinci Oxid. and Ung.

Exophthalmic Goitre.—Belladonna, Digitalis, Duboisine, Iron Salts, Quinine preps.

Eye: Pupil, Contractors of.—Jaborandi and Pilocarpine, Opium and Morphia, Physostigma and Eserine.

Eye: Pupil, Dilators of.—Belladonna and Atropia, Cocaine, Daturine, Duboisine, Homatropine, Hyoscyamine, Nicotine.

Eye: Local Dilators, but Contract when given Internally in suitable doses.—Gelsemia, Muscarine.

Fainting.—See **Collapse.**

Favus.—See **Parasites, Vegetable, of Skin.**

Fetid Breath.—See **Breath, Fetid.**

Fetid Perspiration.—See **Perspiration, Fetid.**

Fetid Nasal Discharges.—See **Ozœna.**

Fever.—Acid. Salicylic., Aconite, Ammon. Acet. Liq. and Carb., Antimony, Belladonna, Chinoline, Cinchonine, Cinchonidiæ Sulph., Digitalis, Eucalyptus Globulus, Gelsemium, Kairine, Piperine, Potass. Acet. Chloras and Citras, Quinine preps., Quinidiæ Sulph., Quinetum, Salicin, Sodii Salicylas, Veratrum viride, Warburg's Tincture.

Fissures of Nipples.—*Local*—Acid. Tannic. Glycerin., Alcohol, Argent. Nit., Calcis Aqua, Collodium Flexile, Hydrastis Tinct., Plumbi Subacet. Glycerin., Styptic Colloid.

Flatulence.—Acid. Carbolic., Acid. Sulphuros., Æther. Spt., Assafœtida, Bismuth preps., Capsicum, Carbo Ligni, Chloromorphiæ Liquor, Creasote, Magnesia preps., Menispermin, Menth. Pip. Ol., Nux Vomica, Sodæ Bicarb., Sulphocarbolates, Zingiberis Tinct.

Galactorrhœa.—See **Milk.**

Gall Stones and **Hepatic Colic.**—Æther Spt., Amyl Nitris, Anæsthetics, Chloral Hydras, Iridin, Morphia preps., Nitroglycerine, Podophyllin.

Gastralgia.—Acid. Hydrocyanic. Dil., Æther. Spt., Alkalies, Belladonna, Bismuth, Calcis Aqua, Cerii Oxalas, Chloroform, Chloromorphiæ Liq., Creasote, Magnesia, Manganesii Oxid., Pepsin.

Gastric Catarrh.—See **Catarrh, Gastric.**

Glands, Enlarged.—*Internal*—Calcii Chlorid., Ferri Iodid. and Iron Salts, Iodoform, Iodum, Morrhuæ Ol., Potass. Iodid., Sodii Iodid.——*Local*—Cadmii Iodid. Ung., Hydrarg. Oleat. and Emplast., Iodi Decolor. Tinct., Iodi Linim. and Ung., Potass. Iodid. Ung.

Glaucoma.—*Local*—Eserine.

Gleet.—See **Gonorrhœa.**

Goitre.—*Internal*—Acid. Hydrofluoric. Dil., Hydrarg. Biniodid., Iodum, Phosphorus, Potass. Iodid., Sodii Iodid. ——*Local*—Acid. Acetic. inj. hypod., Hydrarg Biniodid. Ung., Hydrarg. Oleat., Hydrarg. Ung., Iodi inj. hypod T.H., Iodi Linim. and Ung.

Gonorrhœa.—*Internal*—Aconite, Copaiba, Cubebs, Iron Salts, Potash Salts, Saline Aperients, Santali Ol.——*Local*—Acid. Carbolic., Acid. Sulphuros., Acid. Tannic., Argent. Nit., Belladonna, Bougies Urethral (See Index), Eucalyptus Oil emulsified, Hydrarg. Perchlor., Hydrastis Tinct., Iodoform, Iodof. et Eucalypti Cereolus, Iodoformi Cereolus, Potass. Permang., Sodii Silicat. Sol., Zinci Chlorid. Permang. and Sulphocarb.

Gout.—Aconite, Asparagin, Colchicum and Colchicin, Coto and Cotoin, Guaiacum, Lithiæ Carb. and Citras, Manganese Salts, Potass. Citras and Iodid., Sodæ Phosph., Sodii Benzoas Hippuras and Iodid., Sulphides.

Gums, Inflamed, and Spongy.—*Local*—Alumen, Iodi Tinct., and cum Aconiti Tinct., Krameriæ Tinct., Myrrhæ et Boracis Tinct., Potass. Chloras, Pastil, Tablet and Troch., Pyrethri Tinct., Sodii Chloras and Troch.

Hæmatemesis.—Acid. Gallic., Acid. Sulph. Dil., Alumen, Ergota, Hamamelis, Iron Persalts, Plumbi Acet., Terebinth. Ol.

Hæmaturia.—Acid. Gallic., Antimony, Camphor, Cannabis, Ergota, Ferro-Alumen, Hamamelis, Terebinth. Ol.

Hæmoptysis.—Acid. Gallic., Acid. Pyrogallic., Acid. Sclerotic., Acid. Sulph. Dil., Alumen, Digitalis, Ergota and Ergotin, Hamamelis, Opium.

Hæmorrhage.—*Internal*—Acid. Gallic., Acid. Pyrogallic., Acid. Sclerotic., Acid. Sulph. Dil., Cupri Sulph., Digitalis, Ergota, Ergotin, Eucalyptus Gum, Ferro-Alumen, Hamamelis, Iron Persalts, Plumbi Acet., Terebinth. Ol.——*Local*—Acid. Tannic., Alumen, Catechu, Cupri Sulph., Eucalyptus Gum, Ferri Perchlorid., Ferro-Alumen, Hamamelis, Matico, Styptic Colloid, Zinci Chlorid. Liq.

Hæmorrhage, Post Partum. — *Internal* — Acid. Sclerotic., Amyl Nitris, Ergota, Ergotin inj. hypod., Ergotinini inj. hypod., Gossypii Rad. Cort., Opium with Alcohol.——*Local*—Alumen, Ferri Perchlorid. Gossyp. and Liquor.

Hæmorrhoids. — *Internal* — Aloes, Cascara Sagrada Hamamelis, Liquoritiæ Co. Pulv., Piper. Conf., Rhamnus Frangula, Senna and Conf., Sulphur.——*Local*—Acid. Boracic. Ung., Acid. Nit. (caustic), Gallæ cum Opio. Ung., Hamamelis, and Suppos. of, Plumbi. Subacet. Glyc. and Ung.

Hay Fever.—*Internal*—Ammon. Chlorid., Anthoxanthum, Belladonna, Grindelia, Potass. Iodid., Quinine preps., Stramonium.——*Local*—Acid. Salicylic. Pulv., Bismuth. Co. Pulv., Camphor, Carbolised Smelling Salts, Carbon. Tetrachlor. Vapor, Quiniæ Collunarium, Stramonium Fumes.

Headache, Bilious or Sick—Euonymin, Guarana, Hydrastis, Iridin, Juglandin, Leptandrin, Myricin, Podophyllin, Sodii Phosph. Efferves., Sodii Sulph. Efferves., Sodio-Magnes. Sulph.. Efferves.

Headache, Congestive or Inflammatory.—Actæa, Ammon. Chlorid, Antimony, Crotonis Ol., Hydrarg. Subchlorid., Ricini Ol., Veratri viridis Tinct.

Headache, Nervous.—Acid. Hydrocyanic., Actæa, Ammon. Arom. Spt., Arsenic, Belladonna, Bromides, Caffeine, Camphora, Cannabis, Cimicifugin, Croton-Chloral, Ferri Valerianas, Guarana, Iron Salts, Nitroglycerine, Quiniæ Valerianas, Theine, Zinci Lactas Oxidum and Valerianas.

Hectic Fever.—Acid. Benzoic. and Benzoates, Acid. Salicylic., Acid. Sulph. Aromat., Agaricus albus and Agaricin, Gelsemium, Quinine preps., Salicin, Salicylates.

Hemiplegia.—See **Paralysis.**

Herpes, and Zoster.—*Internal*—Morphiæ. inj. hypod. (for pain), Quinine preps., Salines and Saline Aperients.——*Local*—Amyli Glycerin., Collodium, Hydrarg. Ammon. Ung. Menthol (for pain), Vaseline, Zinci Oleat. Ung., Zinci Ung.

Hiccough.—Æther. Spt., Camphora, Chloral, Chlorof. Spt., Morphia preps., Sodæ Bicarb.

Hordeolum.—*Local*—Argent. Nit., Belladonnæ Fotus, Hydrarg. et Morphiæ Oleat., Iodi Tinct.

Hydrophobia—Anæsthetics, Amyl Nitris, Cannabis Indica and Cannabin, Chloral, Curara, Morphia, Nitroglycerine, Pelletierine, Physostigma and Eserine, Pilocarpine.

Hysteria.—Actæa, Assafætida, Bromides, Cannabis Indica, Cypripedin, Iron Salts, Nux Vomica, Phosphorus, Pulsatilla, Quinine preps., Strychnia, Valerian and Valerianates, Zinc Salts.

Impetigo.—*Internal*—Arsenic, Iron Salts, Mineral Acids, Morrhuæ Ol., Phosphorus, Quinine preps., Zinc Salts.——*Local*—Acid. Tannic. Glycerin., Hydrarg. Ammon. Ung., and

Hydrarg. Ammon. cum Sulph. Ung., Iodoform. and Ung., Zinci Oleat. Ung., Zinci Oxid. Ung.

Impotence.—Arsenic, Cannabis Indica and Cannabin Tannas, Cantharides, Coca and Cocaine, Damiana, Ergota and Ergotin, Ferri Perchlorid., Nux Vomica, Phosphorus, Sanguinaria, Strychnia, Zinci Phosphid.

Incontinence of Semen.—Belladonna, Ergota, Ferri Perchlorid., Ferri Phosph., and Ferri Quin. Strych. Phosph. Syrup., Gokhru.

Incontinence of Urine.—Belladonna, Calcis Phosph., Cantharides, Ergota, Ferri Iodid., Ferri Perchlorid., Gokhru.

Indigestion.—See **Dyspepsia.**

Inflammation.—*Internal*—Aconite, Antimony, Belladonna, Digitalis, Gelsemium, Hydrarg. Subchlorid. and cum Opio, Opium, Quinine preps., Salicin, Veratria.

Influenza.—Actæa, Ammon. Acet. Liq., Æth. Nit. Spt., Ammoniæ Spt. Aromat., Antim. Tart., Camphor, Hydrocyanic Acid, Ipecac. Co. Pulv., Opium and Morphia preps., Quinine preps.

Insomnia.—Ammon. Bromid., Bromal-Hydras, Camphor, Camphor Monobrom., Cannabis Indica and Cannabin, Chloral, Coca, Codeia, Croton - Chloral, Hyoscyamine, Lupulin, Morphia, Narceia, Opium, Paraldehyde, Papaverina, Piscidia, Potass. Bromid., Sodii Bromid., Stramonium.

Intertrigo.—Acid. Boracic. and Ung., Acid. Tannic. Glycerin., Calaminæ Lotio, Calcis Aqua, Calcis Carb., Camphor, Fullers' Earth, Kaolin, Vaseline, Zinci Cremor and Ung., Zinci Oleat. Pulv.

Intestinal Worms.—See **Parasites, Intestinal.**

Iritis.—*Internal*—Colchicum, Iodum, Hydrarg. Perchlorid. and Subchlorid., Potass. Iod.——*Local*—Atropia cum Vaselin., Atropiæ Sulph. Guttæ, Belladonna, Duboisine.

Itch.—See **Scabies.**

Jaundice.—Acid. Nitro-Hydroch. Dil., Aloes, Ammon. Chlorid., Benzoates, Euonymin, Hydrarg. cum Cretâ, Hydrarg. Subchlor., Hydrastis, Iridin, Manganesii Oxid. and Mangan. Sulph., Podophyllin, Sennæ Co. Mist., Sodii Phosphas and Sodii Phosph. Efferves., Sodii Sulphas, and Sodii Sulph. Efferves., Stillingia, Taraxacum.

Laryngismus Stridulus.—Amyl Nitris, Bromides, Chloral, Coniæ Hydrobrom., Emetin, Piscidia.

Laryngitis, Acute.—Aconiti Tinct. and Pastil., Æthyl Iodid. (for Œdema), Ammon. Acetat. Liq., Antimony, Benzoini Vapor, Hydrarg. Subchlor., Juniper. Vapor, Pulsatilla, Thymol Vapor, Acid. Tannic. et Aluminis Gargarisma, Acid. Tannic. Glycerin, Argent. Nit.

Laryngitis, Chronic.—*Local*—Bismuth. Oxychloridi cum Morphiâ Insufflatio, Catechu Pulv. Insufflatio, Creasoti Vapor, Eucalypti Gum. Insufflatio, Juniperi Vapor, Pin. Sylvestris Vapor.

Leprosy.—Anacardium, Gurjun Balsam, Gynocardiæ Ol.

Leucocythemia.—Digitalis, Hypophosphites, Iodine Iron Salts, Phosphorus, Zinci Phosphid.

Leucorrhœa.—*Internal*—Iron Salts, Mineral Acids, Vegetable Tonics.——*Local*—Acid Carbolic. Lotio, Acid. Boracic. Lotio, Alumen, Hydrastis, Pulsatilla, Potass. Permang., Sodii Silicat. Liquor, Tannin and Alum Injection, Zinci Sulphocarbolas.

Locomotor Ataxy. — Argent. Nit., Argent. Oxid., Morrhuæ Ol., Phosphorus, Physostigma, Pilocarpine.

Lumbago.—*Internal*—Actæa, Atropia, Belladonna, Capsicum, Cimicifugin, Colchicum, Colocynthis, Morphia inj. hypod., Potass. Iodid.——*Local*—Atropiæ Linim., Belladonnæ Linim., Capsici Linim., Menthol Linim., Opii Linim., Picis Empl., Veratriæ Ung.

Lupus.—*Internal*—Amyli Iodid., Arsenic, Gynocard. Ol., Iodum, Morrhuæ Ol., Phosphorus, Quinine preps.——*Local*—Acid. Chromic., Camphora Salicylata, Gynocardiæ Ung., Iodoform, Petrolei Ceratum, Zinci Chlorid. Pasta, Zinci Ung.

Mammary Abscess. See **Breast, Inflammation of.**

Mania.—Actæa, Atropia, Bromides, Cannabis and Cannabin Tannas, Chloral Hydras, Conia, Daturine, Digitalis, Duboisine, Gelsemia, Hyoscyamine, Morphia preps., Opium preps., Paraldehyde.

Measles.—Aconite, and Pastil of, Æther Nit. Spt., Ammon. Acet. Liq., Ammon. Carb., Ipecacuanha, Potass. Tart. Acida.

Melancholia.—Bromides, Camphora, Coca and Cocaine, Cannabis, and Cannabin Tannas, Musk, Nux Vomica, Phosphorus, Valerianates.

Menière's Disease.—Acid. Salicylic., Bromides, Gelsemium, Gelsemine, Pelletierine.

Menorrhagia.—Acid. Gallic., Acid. Sclerotic., Acid. Sulph. Dil., Bromides. Cannabin, Digitalis, Ergota, Ergotin, Ferro-Alumen, Hamamelis, Iron Persalts, Vinca Major.

Milk, to increase flow.— Acid. Lactic., Jaborandi and Pilocarpine, Malti Ext.

Milk, to arrest flow.—*Internal*—Agaricus albus and Agaricin, Belladonna and Atropia, Conium, Ergota, Saline Purgatives, Sodii Iodid. — *Local* — Belladonnæ Empl. Glycerin. and Linim., Tabaci Cataplasm.

Myalgia —*Internal*—Actæa, Ammon. Chlorid., Atropia inj. hypod., Cimicifugin, Iron Salts, Morphia inj. hypod., Salicylates.——*Local*—Belladonnæ Glycerin. and Linim., Capsici Empl. and Linim., Ether Spray, Iodi Linim., Menthol, Opium (in poultice), Veratriæ Ung.

Myxœdema.—Arsenic, Iron Salts, Jaborandi, Nitroglycerine, Pilocarpine, Strychnia Preps.

Nasal Catarrh.—See **Catarrh, Nasal.**

Nævi.—*Local*—Acid. Chromic., Acid. Nitric., Collodium, Sodii Ethylas, Zinci Chlorid. Iodid. and Nitras.

Nephritis.—Buchu, Copaiba, Gokhru, Hordei Dec., Jaborandi, Lini. Infus., Pareira, Santal. Ol., Triticum Repens, Uva Ursi.

Nervous Debility, Nervousness.—Acid. Hydrobromic., Acid. Phosph. Dil., Ammon. Bromid., Assafœtida, Camphora, Chloral Hydras, Cimicifugin, Cypripedin, Lavand. Co. Tinct., Phosphorus, Piscidia, Potass. Bromid., Quiniæ preps., Quiniæ Valerianas, Salicin, Scutellarin, Strychnia, Sumbul, Zinci Valerianas.

Neuralgia.—*Internal*—Aconite, Actæa, Ammon. Chlorid., Ari Succus, Arsenic, Beberiæ Sulph., Bromides, Caffeine, Chloral-Hydras, Cinchonine, Cinchonidiæ Sulph. Colchicum and Colchicin, Conium and Coniæ Hydrobromas, Croton Chloral, Gelsemium and Gelsemin, Hyoscyamine, Iron Salts, Narceine, Nitroglycerine, Phosphorus, Quinine preps., Quiniæ Hydrobrom., Theine, Tonga. —— *Local* — Aconiti Linim., Aconitiæ Ung., Belladonnæ Linim. and cum Chloroform., Chloral Hydras cum Camphor, and cum Menthol, Chloroform, Delphiniæ Ung., Menthol, Menthol Linim., Morphiæ Oleat., Oleanodyne, Opii Linim., Po-ho-yo, Veratriæ Ung.

Night Sweats.—Acid. Gallic., Acid. Sulph. Aromat., Agaricus albus and Agaricin, Amyl Nitris, Atropia and inj. hypod., Belladonna, Calcii Chlorid., Coto and Cotoin, Homatropine, Hypophosphites, Ipecac. Co. Pulv., Iron Salts, Jaborandi and Pilocarpine, Muscarine Nit., Picrotoxin, Quinine preps., Zinci Oxid.

Nipples, Fissures of, and Sore.—See **Fissures of Nipples.**

Nymphomania and Satyriasis.—Bromides, Camphor, Conium, Tabaci Folia.

Obesity.—Alkalies and Alkaline Carbonates, Fucus Vesiculosus, Iodum, Potass. Iodid.

Ophthalmia.—See **Conjunctivitis.**

Ophthalmia Tarsi.—*Local*—Acid. Boracic. Lotio, and Ung., Hydrarg. Oxid. Flav. Ung., Iodoform. Ung., Plumbi Subacet. cum Petroleo Ung.

Otorrhœa.—*Local*—Acid. Tannic. Glycerin., Argent. Nit. and Bism. Insuffl. T.H., Alum. Insuffl., Alum and Bism. Insuffl. T.H., Calendula, Carbonis Deterg. Liq. (as Lotion), Acid. Boracic. Insufflat., Iodoform Wool and Insuffl. cum Bismutho T.H.

Ozœna.—*Local*—Acid. Boracic. Lot. and Ung., Acid. Carbolic. Buginarium, Aldehydi Vapor, Alumen, Alumin. Acet. Liq., Creasoti Vapor, Cupri Sulph. Buginarium, Eucalypti Globuli Infus. and Tinctura, Iodoformi Buginarium, Iodoformi Rosat. Ung., Potass. Permangan. Lotio, Sanitas (toilet), Sodæ Chlorinat. Liq., Sodii Chlorid., Sodii Silic. Sol., Thymol Lotio, Zinci Sulphocarb., Zinci Sulph. Buginarium.

Palpitation.—Aconite, Bromides, Camphora, Cannabis, Cimicifuga, Convallaria, Digitalis, Valerianates.

Paralysis Agitans. — Hypophosphites, Hyoscyamus, Iron Salts, Phosphorus, Physostigma, Strychnia.

Paralysis, Diphtheritic.—Iron Salts, Pepsin, Nux Vomica, Ferri Iodid.

Paralysis, Hemiplegia. — Ergota, Iron Salts, Nux Vomica, Phosphorus, Physostigma and Eserine.

Paralysis, Paraplegia.—Ergota, Hypophosphites of Iron Lime and Soda, Iron Salts. Ergota, Phosphorus, Physostigma and Eserine, Rhois Tinct., Strychnia.

Parasites, Animal, on Skin. — *Local* — Hydrarg. Oleat., Hydrarg. Perchlorid. Lotio and Ung., Hydrarg. Ammon. Ung., Naphthalin Ung., Napthol Ung., Pyrethri

Flores Pulv. and Tinct., Sapo viridis, Staphisagria, Sulphur Baths Lotion and Ung., Sulphurated Lime Lotion.

Parasites, Vegetable, on Skin.—*Local*—Acid. Boracic., Acid. Carbolic., Acid. Chrysophanic. Ung., Acid. Sulphuros., Hydrarg. Oleat., Phosphor. Ol., Picrotoxin Pigment., Sodii Hyposulphit. Lotio., Thymol Ung.

Parasites, Intestinal Worms.—Areca (Ascarides and Lumbrici), Cambogia, Ferri Perchlorid. Enema (Ascarides), Filix Mas (Tænia), Hydrarg. Subchlorid., Jalapa, Kamala (Tænia), Kousso (Tænia), Mucuna, Pelletieriæ Sulph. and Tannas (Tænia), Quassiæ Enema (Ascarides), Santonin and Sodii Santonas (Ascarides and Lumbrici), Scammonium, Terebinth Ol.

Peritonitis.—Aconite, Digitalis, Hydrarg. Subchlorid. cum Opio, Opium, Opium and Belladonna, Veratrum Viride.

Perspiration, Excessive.—*Internal*—Acid. Phosph. Dil., Acid. Sulph. Aromat., Atropia and inj. hypod., Belladonna, Ergota, Jaborandi and Pilocarpine, Picrotoxin, Quinia preps.——*Local*—Amyli Pulv., Diachyli Ung., Kaolin, Tannin, Zinci Oleat. Pulv. and cum Thymol., Zinci Oxid.

Perspiration, Fetid.—*Local*—Acid. Boracic. Lotio. and Ung., Acid. Carbolic. Lotio. and Ung., Acid. Salicylic. Pulv. cum Talco, Aluminii Acet. Lotio, Belladonnæ Linim., Diachyli Ung., Plumbi Subacet. cum Petroleo Ung., Zinci Oleat. cum Thymol.

Phthisis.—Acid. Lactic. and Lactates, Aconite, Æthyl Iodid., Arsenic, Benzoates, Caffeine, Calcii Chlorid., Calcis Hypophosph. and Phosph., Codeia, Coto, Creasotum, Gynocardiæ Ol. (externally), Iodi Linim. and Vapor, Ipecac. Nebula, Iron Salts, Morrhuæ Ol., Pancreatin, Pepsin, Picrotoxin, Piscidia, Prunus Virginiana, Quinine preps., Salicin Salicylic Acid and Salicylates, Sodii Hypophosph., Terebenæ Vapor.

Piles.—See **Hæmorrhoids.**

Pityriasis.—*Local*—Acid. Boracic. Lotio and Ung., Acid. Chrysophanic. Ung., Boracis Glycerin. and Lotio, Gynocardiæ Ung., Huile de Cade, Picis Ung., Plumb. Subacet. cum Petroleo Ung.

Pleurisy.—Aconite, Ammon. Acet. Liq., Antimony, Bryonia, Jaborandi, Lyttæ Empl., Morphia preps., Potass. Iodid., Quinine preps.

Pleurodynia.—See **Myalgia.**

Pneumonia.—Acid. Salicylic., Aconite, Ammon. Carb., and Chlorid., Antimony, Digitalis, Hyoscyamus, Morphia preps., Quinine preps., Salines, Veratrum viride.

Post Partum Hæmorrhage.—See **Hæmorrhage.**

Pregnancy, Vomiting of.—Belladonna, Bismuth preps., Cerii Oxalas, Chloroform, Creasote, Hydrocyanic Acid, Ingluvin, Ipecac. Vin., Iridin, Morphia preps. and inj. hypod., Nux Vomica, Pepsin, Quinine preps.

Prurigo.—*Internal*—Arsenic, Bromides, Iron Salts, Pilocarpine, Quinine preps.——*Local*—Acid. Boracic. Lotio and Ung., Acid. Carbolic. Lotio and Ung., Borax, Iodoform., Pilocarpine, Staphisagria, Sulphur. Ung., Sulph. cum Hydrarg. Ung., Tar.

Pruritus Ani, Vulvæ, &c.—*Local*—Acid. Benzoic., Acid. Boracic. Lotio and Ung., Acid. Carbolic. Lotio and Ung., Acid. Salicylic. Ung., Acid. Sulphuros. Lotio, Alkalies (Lotion of), Alumen, Argent. Nit. Sol., Carbonis Liq. Lotio., Chloroformi Ung., Gallæ cum Opio Ung., Hydrarg. Oleat., and cum Morphiâ, Hydrarg. Subchlorid. Ung. and Lotio Nigra, Plumbi Subacet. cum Petroleo. Ung., Potass. Cyanid. Lotio, Tannin.

Psoriasis.—*Internal*—Arsenic preps., Cantharides, Gynocard'æ Ol., Hydrarg. Iodid. Viride, Iron Salts, Morrhuæ Ol., Phosphorus, Quinine preps., Sulphur.——*Local*—Acid. Carbolic. Ung., Acid. Chrysophanic. Ung., Acid. Pyrogallic. Ung., Acid. Salicylic. Ung., Betulæ Pyrolig. Ol., Carbonis Liq. Lotio, Fagi Pyrolig. Ol., Gynocardiæ Ol., Huile de Cade, and Ung., Picis Ung., Rusci Pyrolig. Ol., Sulphides (in Baths).

Puerperal Fever.—Acid. Boracic, Jaborandi and Pilocarpine, Ferri Perchlorid., Opium, Quinine, Terebinth. Ol.,

Pupil of Eye: to contract and dilate.—See **Eye.**

Purpura.—Acid. Gallic., Acid. Sulphuric., Ergota, Iron Salts, Phosphorus, Quinine preps., Terebinth. Ol.

Pyæmia.—Acid. Salicylic, Eucalyptus Globulus, Kairine, Quinine preps., Resorcin, Salicin, Sulphites.

Pyrosis.—Acid. Hydrocyanic., Acid. Hydrochlor. Dil., Acid. Nit. Dil., Acid. Sulphuros., Bismuth preps., Carbo Ligni, Cerii Oxalas, Magnesia, Manganesii Oxid., Sodæ Bicarb., Sodii Sulphocarbolas.

Quinsy.—See **Throat Inflammation.**

Remittent Fever.—Apiol, Eucalyptus Globulus, Narcotina, Quinine and other Cinchona Alkaloids, Salicin, Warburg's Tincture.

Rheumatism, Acute.—Acid. Benzoic and Benzoates, Acid. Salicylic and Salicylates, Aconite, Actæa and Cimicifugin, Colchicum and Colchicin, Coto and Cotoin, Ferri Perchlorid., Lemon or Lime Juice, Opium, Ozonic Ether, Potass. Bicarb. Cit. and Nit., Quinine preps., Salicin, Trimethylamine.

Rheumatism, Chronic.—*Internal*—Actæa, Antim. Sulphurat., Arsenic, Cimicifugin, Cinchonidiæ Salicylas, Colchicum, Ferri Iodid. Syr., Ferri Salicylas., Gelsemium, Guaiacum, Iodum., Phytolaccin, Podophyllin, Potass. Iodid., and cum Quiniâ, Rhus.——*Local*—Atropiæ Linim., Bellad. Linim. and Linim. Co., Camph. Co. Linim., Capsici. Emp. and Linim., Chloral cum Camphor., Eucalyptus Oil., Opii Linim., Pini Sylvest. Ol.

Rheumatoid Arthritis.—Actæa, Arsenic, Colchicum, Ferri Salicylas, Lithiæ Carb. and Citras., Morrhuæ Ol., Potass. Bromid. and Iodid., Sulphides (Baths of).

Rickets.—Acid. Phosph. Dil., Calcis et Ferri Phosph. Pil., Calcis. Liq. Sacch., Calcii Chlorid., Calcis. Phosph., Calcii Lactophosph. Syr., and cum Ferro, Ferri Phosph. Syr., and Comp., Morrhuæ Ol., Ferri Vinum, Wheat Phosphates Saccharated.

Ringworm.—See **Tinea.**

Salivation.—*Internal*—Acid. Hydroch. Dil., Chlorates

Coto.—*Local*—Acid. Boracic., Alumen, Borax, Chlorates, Creasoti Vapor.

Sarcinæ.—Acid. Sulphuros., Calcii Chlorid., Sodii Hyposulphis, Sodii Sulphis, Sodii Salicylas.

Satyriasis.—See **Nymphomania.**

Scabies.—*Local*—Calcii Sulphid. Liq., Hydrarg. Perchlorid. Ung., Naphthalin Ung., Naphthol Ung., Potass. Sulphurat. Balnea, Styracis Ung., Sulphur. Ung., Sapo Viridis.

Scalds.—See **Burns.**

Scarlatina.—Acid. Salicylic., Aconite, Ammon. Carb., ladonna, Ozonic Ether, Potass. Chloras, Sodii Chloras.

Sciatica.—*Internal*—Actæa and Cimicifugin, Atropia, Colchicum and Colchicin, Croton Ol., Lithiæ Citras, Morphiæ inj. hypod., Potass. Iodid., Tereb. Ol.——*Local*—Aconitiæ Ung., Bellad. Linim., Chloroform Linim., Menthol, Menthol cum Camphorâ, Menthol Linim., Veratriæ Ung.

Scrophula.—Calcis Phosph., Calcii Sulphid., Calcii Chlorid., Ferri et Calcis Phosph. Pil., Ferri Iodid. Syr., Ferri Phosph., Hydrarg. Iodid. Virid., Iodum., Iodoform., Morrhuæ Ol., Quinine preps., Rumicin.

Scurvy.—Lime Juice, Lemon Juice, Phosphorus, Potass. Chloras and Citras Sassafras.

Sea-Sickness.—Amyl Nitris, Chloral Hydras, Chloroform., and Tinct. Co., Morphiæ inj. hypod., Nitroglycerine, Tablets ($\frac{1}{100}$ gr.), Potass. Bromid., Sodii Bromid., Sodii Nitris.

Shingles.—See **Herpes Zoster.**

Sleeplessness.—See **Insomnia.**

Spasm.—Aconite, Æther, Ammon. Arom. Spt., Amyl Nitris, Atropia. inj. hypod., Cajeput. Ol., Camphora, and Camphor. Spt. Fort., Chloroform, and inhaled; Chloromorphiæ Liq., Conia, Menth. Pip. Ol., Opium, Piscidia.

Spina Bifida.—*Local*—Iodi Linim., Iodo-Glycerine injected.

Stomatitis.—*Internal*—Eucalypti Globuli Tinct., Hydrastis, Potass. Chloras, Sodii Chloras.——*Local*—Acid. Boracic., Acid. Carbolic., Acid. Salicylic., Acid. Sulphuros, Alumen, Borac. Glyc. and Mel., Calcis Aqua, Cupri Sulph., Myrrh and Borax Tinct., Sodii Chloras. *See Pastils*, p. 141.

Sunstroke.—Apomorphia, Atropiæ inj. hypod., Enemata purgative, Morphiæ inj. hypod., Quinine, Sinapis Emplast.

Sycosis.—See **Tinea.**

Syphilis, Constitutional.—*Internal*—Ammon. Iodid., Amyli Iodid., Ferri Iodid. Syrup, Hydrarg. cum Cretâ, Hydrarg. Cyanid. Pil., Hydrarg. Iodid. Rub. and inj. hypod., Hydrarg. Iodid. Viride, Hydrarg. Perchlorid., Hydrarg. Pil., Hydrarg. Subchlorid., Hydrarg. Tannas, Iodum, Phytolacca, Potass. Iodid., Sarsa, Sodii Iodid., Stillingia.——*Local*—Hydrarg. Oleat. and cum Morphiâ, Hydrarg. Ung.

Syphilis, Skin Diseases.—*Local*—Hydrarg. Ammon. Ung., Hydrarg. Emplast., Hydrarg. Nit. Ung., Hydrarg. Oleat., Hydrarg. Perchlorid. Ung., Hydrarg. Subchlorid. Balnea, Fumigation and Ung., Hydrarg. Ung., Iodoformi Gossyp. and Ung., Pix Liquida, Resorcin.

Syphilitic Sore Throat.—Alum. Garg., Borax Garg. and Mel. Boracic, Hydrarg. Cyanid. Garg., Hydrarg. Perchlorid. et Potass. Chlorat. Pastil., Hydrarg. Perchlorid. Garg., Iodoformi Insufflatio and Pastil., Potass. Chloras Garg: Pastil. and Troch., Sodii Chloras Garg. and Troch.

Syphilitic Ulcers.—*Local*—Amyli Iodid Pasta, Hydrarg. Acid. Nit. Liq., Hydrarg. Oleat., and cum Morphiâ, Hydrarg. Flava and Nig. Lotio, Hydrarg. Subchlorid., Iodoform and Collodium cum Iodoformo, Iodoform Wool, Iodoformi Ung., Resorcin, Zinci Chlorid. Iodid. and Nitras.

Tetanus.—Amyl Nitris, Cannabis, Chloral Hydras, Conia, Curara, Gelsemium, Morphia, Nicotine, Opium, Pelletierine, Physostigma and Eserine.

Thirst, to Relieve.—Acid. Citric., Acid. Phosph. Dil., Acid. Sulph. Aromat., Acid. Tartaric., Coca, Elixir Acid., Potass. Tart. Acida.

Throat, Inflammation of, and Tonsillitis—*Internal*—Acid. Salicylic., Aconiti Tinct. and Pastil, Antimony, Belladonna, Ferri Salicylas, Quiniæ Salicylas.——*Local*—Benzoin. Tinct. Vapor, Iodi Vapor, Juniperi Ol. Vapor, Chlorates in Pastil and Troch., Lupulin Vapor.

Throat, Relaxed Sore.—*Local*—Acid. Carbolic. Pastil. and Vapor, Acid. Hydroch. Dil., Acid. Tannic Garg. and Glycerin., Alumen, Argent. Nit., Benzoin. Tinct. Vapor, Bismuth. Pastil., Catechu Insuffl., Eucalyptus Gum Insuffl., Ferri Perchlorid. Pigment., Ferro-Alumen, Guaiaci Troch., Pini Sylvest. Vapor.

Thrush.—See **Aphthæ.**

Tinea Favosa, and Sycosis.—*Local*—Acid. Carbolic. Glycerin., Acid. Chrysophanic., Acid. Sulphuros., Anacardium, Cupri Oleat. Ung., Hydrarg. Oleat., Hydrarg. Perchlorid. Lotio., Iodi Linim., Menthol, Picrotoxin Pigment, Sodii Hyposulph. Lotio.

Tinea Tarsi.—See **Ophthalmia Tarsi.**

Tinea Tonsurans.—*Local*—As for **T. Favosa** and—Cantharid. Pigment, Hydrarg. Nit. Acid. Ung., Iodi et Olei Picis Pigment., Iodized Phenol.

Tinea Versicolor.—*Local*—Acid. Chrysophanic., Acid. Sulphuros., Borac. Glycerin., Liq. Calcii Sulphidi, Gynocard. Ol., Sodii Hyposulph. Lotio.

Toothache.—*Internal*—Acid. Hydrobromic, Croton-Chloral Hydras, Gelsemium, Gelsemiæ Hydroch., Gelsemin., Morphiæ inj. hypod., Piscidiæ Ext. Fluid., Quin. Tinct. Ammon. ——*Local*—Acid. Arsenios., Acid. Carbolic., Caryophyll. Ol., Chloroform. cum Camph., Chloroform. cum Mastic., Creasotum, Croton-Chloral cum Menthol, Iodi et Aconiti Tinct., Opii Tinct., Pyrethri Tinct.

Trichinosis.—Ergota, Ergotin, and Sclerotic Acid.

Typhoid Fever.—Acid. Salicylic., and Salicylates, Ammon. Carb., Cinchona Alkaloids, Ergota. (for Intestinal Hæmorrhage), Eucalyptus Globulus, Kairine, Sodii Chloras.

Typhus Fever.—Antimony, Ammon. Carb., Belladonna. Cinchona Alkaloids, Eucalyptus Globulus Hydrastis, Kairine,

Ulcers.—*Local*—Acid. Boracic. Lotio and Ung., Acid. Carbolic. Lotio and Ung., Acid. Salicylic. Gossypium and Ung., Argent. Nit., Belladonnæ Glycerin., Carbonis Cataplasm, Chartazinc, Collodium, Cupri Oleat. Ung., Eucalypti Ung., Fermenti Cataplasm., Hydrogen Peroxid., Plumbi Subacet. Glycerin. and Ung., Potass. Permang., Resinæ Ung., and Res. Ung. cum Chlorof., Sanitas, Styptic Colloid, Zinci Chlorid., Zinci Oleat. Ung., Zinci Sulph. Lotio.

Urine, Incontinence of.—See **Incontinence.**

Uræmia.—Amyl Nitris, Caffeine, Digitalis, Elaterii Pulv. Co., Jaborandi and Pilocarpine, Jalapæ Pulvis Co., Nitroglycerine, Scilla.

Urticaria.—*Internal*—Apis Mellificæ Tinct., Bromides, Mistura Alba, Sodæ Bicarb.——*Local*—Acid. Benzoic. Lotio, Acid. Boracic. Lotio, Acid. Carbolic. Lotio, Acid. Hydrocyanic. Dil. Lotio, Chloroform. Ung., Plumbi cum Lacte Lotio, Sodæ Carb. Balnea.

Uterus, Catarrh of.—See **Catarrh, Uterine.**

Uterus, To cause Contraction of.—Borax, Caulophyllin, Cimicifuga, Gossypii Rad. Cortex., Ergota, Ergotin, Ergotinine, Sclerotic Acid, Hamamelis.

Variola, To prevent Pitting.—Acid. Boracic. Ung., Acid. Carbolic. Ol., Amyli Glyc., Argent Nit., Calcis Linim., Collodium, Hydrarg. Ung., Styptic Colloid., Zinci Oleat. Ung.

Vertigo.—Caffeine, Guarana, Quiniæ Valerian., Quinine, Ammon. Spt. Arom., Strychnia, Zinci Valerian.

Vesical Catarrh.—See **Catarrh, Vesical.**

Vomiting.—Acid. Carbolic, Acid. Carbonic., Acid. Hydrocyanic. Dil., Beef Essence (Brand's), Belladonna, Bismuth Preps., Calcii Chlorid., Calcis Aqua, Cerii Oxalas, Chloral, Chloroform preps., Ingluvin, Ipecacuanha, Magnes. Carb. Liq., Morphiæ inj. hypod., Nitroglycerine, Nux Vomica, Potass. Bicarb. cum Acid. Citric. Mist. Efferves., Sodæ Phosph. Efferves.

Warts and Corns.—*Local*—Acid. Acetic. Glaciale, Acid. Carbolic., Acid. Chromic., Acid. Nit., Collodium Salicylicum, Anacardium, Argent. Nit., Iodi Linim., Papayotin, Thuja.

Whooping Cough.—Acid. Benzoic. and Benzoates, Acid. Hydrocyanic. Dil., Alumen, Amyl Nitris, Atropia, Belladonna, Bromides, Bryonia, Calcis Aqua, Camphora Monobrom., Cannabis, Chloral, Conium, Ergot, Gelsemium, Grindelia, Himrod's Cure, Lobelia, Narceia, Opium, Ozonic Ether, Potass. Carb., Senega, Succini. Ol. (external), Stramonium, Zinci Oxid. and Sulphas.

Wounds.—*Local*—Acid. Benzoic. Lotio, Acid. Boracic, Lotio and Ung., Acid Carbolic. Carbasus Lotio and Ung. Acid. Salicylic. Lotio and Ung., Aluminii Acet. Lotio, Arnica, Benzoin. Tinct., Calendula, Camphora Salicylata and Gossypium, Chartazinc, Collodium, Eucalypti Carbasus and Ung., Iodoform, Iodoform Wool and Ung., Kaolin Ung., Petrolei Cerat., Plumbi Subacet. cum Petroleo Ung., Potass. Permang., Resorcin, Styptic Colloid, Thymol Lotio, Zinci Chlorid., Zinci Sulphat. Lotio.

Zoster.—See **Herpes.**

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